

**Please note: These transcripts are not individually reviewed and approved for accuracy.**

MEETING

STATE OF CALIFORNIA

INTEGRATED WASTE MANAGEMENT BOARD

STRATEGIC POLICY DEVELOPMENT COMMITTEE

JOE SERNA JR., CALEPA BUILDING

COASTAL HEARING ROOM

1001 I STREET, 2ND FLOOR

SACRAMENTO, CALIFORNIA

TUESDAY, JULY 10, 2007

9:15 A.M.

JAMES F. PETERS, CSR, RPR  
CERTIFIED SHORTHAND REPORTER  
LICENSE NUMBER 10063

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

APPEARANCES

BOARD MEMBERS

Ms. Margo Reid Brown, Chairperson

Mr. Wesley Chesbro

Mr. Jeffrey Danzinger

Ms. Rosalie Mul

Ms. Cheryl Peace

Mr. Gary Petersen

STAFF

Mr. Mark Leary, Executive Director

Ms. Julie Nauman, Chief Deputy Director

Mr. Elliot Block, Chief Counsel

Mr. Tom Estes, Deputy Director

Mr. Howard Levenson, Program Director

Mr. Ted Rauh, Program Director

Mr. Fernando Berton

Ms. Cynthia Dunn

Mr. Scott Walker, Manager, Cleanup Branch

ALSO PRESENT

Ms. Nicole Bernson, representing City of Los Angeles  
Councilmember Greig Smith

Ms. Susan Brown, California Energy Commission

Mr. Alex Helou, City of Los Angeles, Bureau of Sanitation

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Kevin Hendrick, Del Norte County Solid Waste  
Management Authority

Dr. Bryan Jenkins, University of California, Davis

Mr. Kurt Kornbluth, University of California, Davis

Mr. Kevin Miller, City of Napa Public Works Department

Ms. Heidi Sanborn, R3 Consulting

Mr. Coby Skye, County of Los Angeles

Mr. Scott Smithline, Californians Against Waste

Ms. Necy Sumait, Bluefire Ethanol

Mr. Chuck White, Waste Management

Dr. Rob Williams, University of California, Davis

Mr. Ramin Yazdani, Yolo County

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

INDEX	PAGE
Roll Call And Declaration Of Quorum	1
Public Comment	246
A. Program Director's Report	1
B. Discussion Of Baseline And Performance Metrics For Strategic Directive #9: Research And Development Of Technology -- (July Board Item 9)	144
C. Discussion Of Bioenergy And Biofuels-Related Activities And Contractor Report Titled: `The Role Of Hydrogen In Landfill Gas Utilization` -- (July Board Item 10)	2
D. Presentation And Discussion Of Contractor Report Titled: `Framework For Evaluating End-Of-Life Product Management Systems In California` -- (July Board Item 11)	163
E. Discussion Of The State Contracting Process And Request For Direction On Related Contracting Issues -- (July Board Item 12)	217
Adjournment	247
Reporter's Certificate	248
PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345	

1 PROCEEDINGS

2 CHAIRPERSON BROWN: Okay. We will run  
3 concurrently and now convene as well the meeting of the  
4 Strategic Policy Development Committee.

5 There are agendas at the back table. If anyone  
6 would like to speak to any item, there are speaker slips.

7 I didn't do it earlier, but remind you to put  
8 your pagers and cell phones in the vibrate mode.

9 We are going to take items somewhat out of order.  
10 We're going to do our workshop presentation, which is Item  
11 10, Committee Item C, first, which will take us through  
12 the morning hour. Then we will take a lunch break and  
13 come back and take up item 9, 11, and 12 after lunch.  
14 Depending on the workshop, we'll determine our lunch break  
15 and how long at that time.

16 So at this time I will turn it over to Howard  
17 Levenson.

18 PROGRAM DIRECTOR LEVENSON: Thank you, Madam  
19 Chair. And good morning, Board members. Howard Levenson,  
20 Director of the Sustainability Program.

21 And as you said, Madam Chair, we have a morning  
22 devoted to the topic of biofuels and bio-energy from solid  
23 waste and landfill gas. Hopefully we can look at  
24 materials being used in a controlled manner to produce  
25 fuels and energy instead of the kind of conflagrations

1 we've seen at Tahoe and what we've had to do in response.

2           So we have a long morning for you, and I'd like  
3 to give you a couple of introductory remarks before  
4 turning it over to Fernando.

5           (Thereupon an overhead presentation was  
6 Presented as follows.)

7           PROGRAM DIRECTOR LEVENSON: It's no secret that  
8 California's population is exploding. If you saw the  
9 Sacramento Bee this morning, the front page was "What's  
10 the population going to look like in 2050?" And with that  
11 increased population, we're going to see enormous  
12 increases in waste generation.

13           So as we look to a future in which we are trying  
14 to at least maintain our 54 percent diversion rate and  
15 hopefully go beyond that to increase diversion, that means  
16 we're either going to have to stop generating waste in the  
17 first place or we're going to have to find homes for  
18 literally tens of millions of tons a year of the  
19 additional materials that are being generated so that they  
20 aren't landfill.

21           So to the extent that that -- those tens of  
22 millions of new tonnages are generated, we're going to be  
23 needing new infrastructure to handle that material and  
24 process it. That means really dozens and dozens, perhaps  
25 almost -- yeah, in the hundreds perhaps of new facilities

1 to handle and process materials into compost, recycled  
2 content products, and other products.

3           And of course at the same time the state is  
4 trying to wean itself from its dependence on fossil fuels  
5 as a transportation fuel and as a source of electricity  
6 generation. And we're also trying to reduce greenhouse  
7 gas emissions that are associated with fossil fuel use.  
8 So in the last couple years of course we've seen the  
9 passage of AB 32, the Governor's executive orders on  
10 energy and biofuels, and a number of other related  
11 directives.

12           These policy goals come together in a lot of  
13 different ways. And one is how they play out in our world  
14 of solid waste management. So the purpose of today's  
15 workshop is really to address that. And we've got a  
16 couple of goals in mind.

17           First is that there have been a lot of activities  
18 that the Board and the Energy Commission and other  
19 agencies have been engaged in over the last several years  
20 related to alternative energy and alternative fuel  
21 production. And we want to make sure that Board members  
22 have a full understanding and knowledge base of those  
23 kinds of activities that have been related to production  
24 of alternative energy and fuel, both from solid waste  
25 itself and from the landfill gas that's generated from

1 solid waste that is land filled.

2           So this workshop is -- the first part is to  
3 provide you with -- we've got about 10 or 11  
4 presentations, a lot of material this morning on that  
5 whole range of activities, both from the solid waste side  
6 and then from the landfill gas side.

7           The second part is to build on the work that we  
8 accomplished with the biomass collaborative out of UC  
9 Davis earlier this year when we had a forum on biofuels  
10 issues, bio-energy issues, and to discuss barriers to the  
11 development of this infrastructure, whether those barriers  
12 are technical, financial, or regulatory; and to discuss at  
13 least potential solutions to overcome those barriers.

14           Lastly, I want to note that this is obviously  
15 linked to our strategic directives. Strategic Directive  
16 9, in particular, two of the four subdirectives deal with  
17 bio-energy and biofuels. So we are presenting this to you  
18 in light of that, our entire work on the strategic  
19 directives. Later on this afternoon, as the Chair  
20 indicated, we'll have a brief presentation on Strategic  
21 Directive 9 in general. Then of course next week there'll  
22 be a much more in-depth discussion of all the strategic  
23 directives that the Board will be having.

24           So this is perhaps a little ahead of the game.  
25 But we're, you know, trying to implement our work on

1 portions of the strategic directives via this set of  
2 activities.

3           The structure for today, Fernando will go over  
4 that in more detail. We have a presentation by Fernando.  
5 And then we have roughly ten speakers. And they're not  
6 really organized in panels. But we thought to make it a  
7 little bit more effective in terms of communication and  
8 less people running back and forth, that we'd bring up  
9 five at a time, have them up here, they can make their  
10 presentations, have any Q and A and discussion you want to  
11 have with them. And then we'll wrap up later on with  
12 another presentation by Fernando and then open it up to  
13 public comment.

14           So with those remarks, I'll turn it over to my  
15 colleague, Fernando Berton. And he'll get the ball  
16 rolling.

17           (Thereupon an overhead presentation was  
18 Presented as follows.)

19           MR. BERTON: Good morning, everybody. And  
20 welcome back, Cheryl. It's nice to see you.

21           Howard is, as always, very good in kind of  
22 setting the stage. And so I'm going to hitchhike on some  
23 of the stuff that he said. But one thing that we would  
24 like to do is kind of have everybody at sort of a common  
25 level of understanding of what's going on, as Howard said.

1 And one of the reasons -- one thing that we need to start  
2 with is: Why are we looking at biofuels and bio-energy?  
3 And there's a lot of different policy directives, as you  
4 can see; different executive orders, like the SO-606 on  
5 biofuel and bio-energy production and use in California;  
6 the low carbon fuel standard; there's also the renewable  
7 portfolio standard that's in law.

8 In addition, we have our own directives, as  
9 Howard mentioned too, Strategic Directives 9.2 and 9.3.  
10 And how all of this plays into AB 32 and greenhouse gas  
11 reduction, climate change reduction issues, you know. And  
12 quite simply with that, if you find alternatives to  
13 landfills, you don't produce methane. Methane has a 23  
14 times greater effect than CO2. In addition, you reduce  
15 the amount of petroleum crude oil that's being extracted.  
16 As a matter of fact, one statistic is that since the  
17 mid-1700s -- that's over 250 years -- we have consumed 13  
18 to 14,000 years' worth of stored carbon. So we're really  
19 tapping into the savings right there. So we need to look  
20 at alternatives.

21 --o0o--

22 MR. BERTON: So what are biofuels? And I'm going  
23 to ask Scott Walker to chime in on areas related to  
24 landfill gas and CNG and LNG, But basically biofuels are  
25 renewable fuels produced from biomass resources to make a

1 liquid or gas fuel. Examples are ethanol and biodiesel;  
2 compressed and liquid natural gas; hydrogen; dimethyl  
3 ester, which is a diesel-like fuel; and biobutanol, which  
4 is another type of alcohol like ethanol.

5 Scott, if you want to talk about CNG at all.

6 CLEANUP BRANCH MANAGER WALKER: Let's see, I  
7 think I've got hydrogen next first.

8 Scott Walker, Cleanup Branch. And I'd just like  
9 to say it's great to see you back, Board Member Peace.

10 Hydrogen. What is hydrogen? Hydrogen, a topic  
11 here today that's important because it does have  
12 significant interest as a potential clean carbon-free fuel  
13 source. And in 2004 the Governor issued an Executive  
14 Order creating a public and private partnership to build  
15 the hydrogen highway in California. And the goal is to  
16 rapidly modernize California's transportation  
17 infrastructure and economy to support use of hydrogen  
18 energy.

19 Basically hydrogen can be used in  
20 fuel-cell-powered vehicles as engine fuel or mixed with  
21 compressed natural gas. Primary current source is fossil  
22 fuel natural gas. And it's produced by a system --  
23 steam-reformation-type system, complex technology. But it  
24 is being produced and used today in various purposes.

25 It also may be produced from methane in biogas,

1 the biomethane, such as from landfill gas, or as directly  
2 from biological processes.

3           It does have its drawbacks. Takes a lot of  
4 energy to produce and is costly. And there's a limited  
5 infrastructure of vehicles and fueling stations. And  
6 there's the explosive issue with hydrogen also.

7           Just later in this workshop UC Davis will present  
8 a report funded by the Board assessing the role of  
9 hydrogen in landfill gas utilization. And we'll talk more  
10 about that.

11           Compressed natural gas -- or liquid natural gas  
12 is another one that I'll present. And essentially  
13 compressed natural gas and liquefied natural gas, they're  
14 relatively clean-burning fuels, increasingly being  
15 utilized as a substitute for gasoline and diesel.

16           The LNG takes the CNG process a step further by  
17 freezing and liquefying the natural gas.

18           Biogas again is a source -- potential source in  
19 particular from landfill gas. But other potential biogas  
20 sources are certainly a possibility, such as anaerobic  
21 digesters, wastewater treatment plants, and dairies.

22           And the Board approved recently, as you recall,  
23 two commercial scale landfill gas to LNG demonstration  
24 projects. And a presentation of one of those projects  
25 will be provided later in the workshop.

1                               --o0o--

2               MR. BERTON:   Thank you.

3               The next thing is:   What are the feedstocks for  
4 bio-energy and biofuels?   We have -- there's a lot of  
5 feedstock in California.   It comes from various sources,  
6 as you can see:   Forestry, ag, urban biomass, the biomass  
7 fraction of solid waste, and landfill gas.

8                               --o0o--

9               MR. BERTON:   As a matter of fact, the California  
10 Biomass Collaborative in their recent road map has  
11 determined that we have 80 billion bone-dry tons annually  
12 of -- in California.   And actually being up in Lake Tahoe  
13 over the weekend, when they say bone dry, it's really bone  
14 dry.

15              Again, the three principal sources are ag,  
16 forestry, and waste.   Forestry in the northern and central  
17 mountains, agriculture in the Central Valley, waste in Los  
18 Angeles and San Francisco.

19                               --o0o--

20              MR. BERTON:   In terms of the waste  
21 characterization in California which is still being  
22 disposed of, 42 million tons still being disposed of in  
23 landfills; 23 million tons is biological in origin, with  
24 5.7 million tons being plastic and textiles.   There's a  
25 lot of BTU value in that material still being land filled.

1 --o0o--

2 MR. BERTON: So, hence, looking at post-MRF  
3 residuals, we've -- the staff and, you know, I believe  
4 we're all in concurrence that the targeted material is  
5 post-MRF residuals. And the policy's always been to look  
6 at post-MRF residuals, respect the waste management  
7 hierarchy as well, not lose site of any source reduction  
8 activities. But the reality is, as Howard stated, and  
9 it's in today's paper, we have a growing population. So  
10 we need to look at alternatives. And as you can see,  
11 post-MRF residuals from single stream, multi-stream, mixed  
12 waste, and C&D is quite a bit. These are numbers from the  
13 Board's waste characterization study of MRFs that was done  
14 recently, I think 2005 or so.

15 --o0o--

16 MR. BERTON: So, you know, these are the kinds of  
17 things that are coming out of the back-end of a MRF that  
18 are destined for landfills still. And it's these targeted  
19 materials that local jurisdictions are looking at.

20 --o0o--

21 MR. BERTON: And some of their projects that you  
22 will hear about today will also -- it talked about the  
23 activities that they'll undertake for upfront recycling to  
24 ensure that more recyclables are pulled out.

25 --o0o--

1 MR. BERTON: So it's quite a bit of material.

2 --o0o--

3 MR. BERTON: So how are they produced?

4 There are two primary pathways, thermochemical  
5 and biochemical processes. Thermochemical processes,  
6 basically looking at pyrolysis and gasification  
7 technologies. And depending on how the technology's  
8 configured, you can either yield a gas or a liquid.

9 There are some hybrid systems that gas from a  
10 gasification system is run through some anaerobic bacteria  
11 to produce an alcohol fuel.

12 You also have what's called Fischer-Tropsch,  
13 which is a secondary process after gasification, to make a  
14 synthetic diesel; again not using a petroleum-derived, so  
15 it's a synthetic diesel.

16 With pyrolysis again you have some gases that  
17 could be used for energy production.

18 --o0o--

19 MR. BERTON: With biochemical processes, we're  
20 talking about anaerobic digestion and fermentation  
21 primarily, anaerobic digestion basically being zero oxygen  
22 yield biogas. It can be used for energy production.

23 With fermentation, that's mostly for alcohol  
24 production. You do have a hydrolysis pre-treatment step  
25 that could be any variety of methods, whether it's

1 enzymatic hydrolysis or strong or weak acid hydrolysis.

2 --o0o--

3 MR. BERTON: Now, this table's a little hard to  
4 read. But these are some of the major technology types  
5 and the status. And this is just a snapshot really of the  
6 different technologies, what they can produce, the  
7 commercial scale or R&D status. Vendors and again status  
8 of some particular projects.

9 This -- we are in the process of updating this.  
10 And we will be continually updating this as we gather more  
11 and more information. The idea is to essentially have  
12 this on the conversion technology web page on a continual  
13 basis.

14 --o0o--

15 MR. BERTON: In terms of where these facilities  
16 are, biochemical facilities predominantly are in Europe,  
17 and mostly with anaerobic digestion.

18 As you can see, in 2000 we had 1.1 million tons  
19 of capacity. There was -- 1.1 million tons of capacity.  
20 In 2004 there was projected 2.8 million tons of capacity.  
21 Quite a large increase. This information was gathered for  
22 us by Rob Williams from the California Biomass  
23 Collaborative, who will be speaking. Any number of papers  
24 that he's done for us under contract, and he always seems  
25 to come up with some great numbers.

1           In terms of thermal facilities, mostly  
2   gasification and waste energy in Japan. You do see some  
3   thermal facilities in Germany as well. But primarily in  
4   Japan they've gone with gasification of waste to energy  
5   because they have no land for landfills. So they're  
6   actually getting away from landfills and going toward a  
7   gasification of waste to energy.

8           And in Europe, the reason they're going away from  
9   land filling as well is there are European directives  
10  for -- they've got landfill bans of organic materials or  
11  severe restrictions on the land filling of organic  
12  materials. So they are looking to anaerobic digestion  
13  because you have essentially a hundred percent capture of  
14  the methane.

15                               --o0o--

16           MR. BERTON: As you can see there, this is a  
17  growth chart of anaerobic digestion capacity in Europe.  
18  So it's pretty steep. And there are a number of --  
19  there's a couple of projects in California that are  
20  proposed as well, and in Australia as well.

21           COMMITTEE MEMBER MULÉ: Excuse me, Fernando.

22           These proposed projects, do you know where  
23  they're at and what their potential capacity is,  
24  currently?

25           MR. BERTON: In California specifically?

1 COMMITTEE MEMBER MULÉ: Yes.

2 MR. BERTON: One of the short-listed companies  
3 for the L.A. County project is aero-ecology, aero-bio.  
4 And I know -- And Coby can talk about that a little bit  
5 more in depth.

6 The company that is operating the digester  
7 facility at UC Davis also has some projects. I believe  
8 they're targeting Fresno and some areas in the Central  
9 Valley.

10 COMMITTEE MEMBER MULÉ: Well, you don't have to  
11 give me a complete answer. But maybe you can come up with  
12 a listing of these potential projects and their potential  
13 capacity for the Board?

14 MR. BERTON: Absolutely.

15 COMMITTEE MEMBER MULÉ: Great. Thank you.

16 --o0o--

17 MR. BERTON: Of course there are some -- those  
18 are some operating facilities in Europe. So it gives you  
19 just an idea of different companies in different  
20 countries.

21 --o0o--

22 MR. BERTON: In terms of hydrolysis and  
23 fermentation facilities, Bluefire Ethanol is proposing a  
24 facility at the El Sobrante Landfill. And we have a  
25 representative from Bluefire who will talk about the

1 status of their project.

2 Masada OxyNol is a proposed facility in New York.  
3 They've gotten it off the ground again. It was sort of on  
4 hold for a while for various reasons.

5 The company Genahol/Waste to Energy, they've got  
6 a pilot scale facility in Ohio. And they've been trying  
7 to get a project in California.

8 And then BRI is that hybrid technology I was  
9 talking about that takes gasification and uses the gas and  
10 runs it through an anaerobic bacteria for ethanol  
11 production.

12 --o0o--

13 MR. BERTON: Most recently the Department of  
14 Energy issued some grants for biorefineries. Of course  
15 Bluefire was one of the recipients, which I'm -- you know,  
16 I'm sure they're very proud of, and Neco will be talking  
17 about that more. But the other biorefineries are sort of  
18 spread out throughout the U.S. And they use different  
19 types of technologies, not just one type. So it runs the  
20 spectrum between thermal and acid and biochemical.

21 And that pretty much ends my presentation.

22 Scott, did -- is there anything you wanted to add  
23 about LNG facilities in California or U.S.?

24 CLEANUP BRANCH MANAGER WALKER: Well, I'd just  
25 summarize by saying that right now really there's pretty

1 limited landfill gas to vehicle fuel production. However,  
2 California's pretty much ahead of the rest of the country.  
3 There's been scattered projects in other states.

4 But as far as CNG, Puente Hills landfill, County  
5 Sanitation Districts of Los Angeles has a project that's  
6 been going on for quite some time. We also have Sonoma  
7 Central landfill, which has a CNG -- landfill gas, a CNG  
8 project that would be used to fuel buses.

9 As far as LNG, we have a current project at F.R.  
10 Bowerman landfill, 5,000 gallon per day, Prometheus  
11 Energy. But as we've presented on the grant awards, we're  
12 really ramping that up. We're going to have three  
13 projects, also at Altamont, which will be presented today,  
14 and Kiefer, and then a ramp-up of the F.R. Bowerman, which  
15 ARB is funding. And we'll have about -- demonstration  
16 projects for over 40,000 gallons per day.

17 So California on that, it's really going to be  
18 interesting to see the next few years whether this really  
19 is going to be viable. And if it, it's going to be  
20 something that we anticipate will be greatly expanded.  
21 There's a lot of potential.

22 CHAIRPERSON BROWN: Thank you, Scott and  
23 Fernando.

24 Any questions for we --

25 COMMITTEE MEMBER CHESBRO: I have a couple

1 comments, if I may, Madam Chair.

2 CHAIRPERSON BROWN: Go ahead.

3 COMMITTEE MEMBER CHESBRO: First of all, I  
4 understand completely that if we want to significantly get  
5 beyond 50 percent and aim towards zero waste, that this  
6 type of production of fuel is going to be an essential  
7 component, and since there are portions of the waste  
8 stream that are very difficult to do other things with,  
9 such as MRF residue. But a couple of cautionary notes  
10 that I think need to be part of the discussion, and I'd be  
11 really interested in having responses -- or having  
12 this -- having these concerns addressed by the folks who  
13 are talking to us about this today.

14 One of them is -- and I harp back to it on a  
15 regular basis -- the hierarchy, which was part and parcel  
16 of AB 939 and the goals that were set. And it has sort  
17 of -- it sort of slipped off the table when 50 percent  
18 became more important -- or not completely off the table,  
19 but it slipped backwards somewhat. And one of my goals is  
20 to try to bring it forward again.

21 And specifically I think we have a responsibility  
22 to demonstrate how we have effectively reduced then source  
23 reduction, which is at the top of the hierarchy as we  
24 proceed further down the hierarchy to try to find tools to  
25 get beyond 50 percent.

1           So that's one concern that I think should not be  
2 forgotten and cannot be forgotten.

3           The second one that troubles me a little bit --  
4 and I'm sure that there's ways that we can structure this  
5 in the future so that this can be addressed. It's not --  
6 neither of these are in any way fatal or unsolvable. But  
7 the other one is trying to make sure that we are targeting  
8 those portions of the waste stream that there aren't  
9 higher uses for, that we don't create a system that  
10 gobbles up -- creates a demand and gobbles up, for  
11 example, high quality fiber and other materials that  
12 should -- that in fact have a more -- a  
13 further-up-the-hierarchy place on the -- in the  
14 marketplace, that we in fact are utilizing this technology  
15 to -- in a very targeted way to achieve increases and not  
16 simply another way to deal with waste that currently does  
17 have a productive use -- waste materials that currently  
18 have productive use.

19           So those are just a couple of sort of caveats  
20 that I think as we proceed down this path, we need to keep  
21 in mind and to continually return to and re-examine and  
22 ask the question about. And I would hope that we can find  
23 ways to structure our approach to these things to address  
24 those issues.

25           CHAIRPERSON BROWN: Thank you.

1           Howard, you want to move on?

2           MR. BERTON:   Okay.   We'll move on to the next  
3 segment as far as current activities.   And what we'd like  
4 to do is ask some of the panel members to come up and sit.

5           So if Dr. Jenkins, Susan Brown, Nocy Sumait from  
6 Bluefire, and Nicole Bernson and Alex Helou could come up  
7 and sit.

8           CHAIRPERSON BROWN:   I guess we'll just do a group  
9 welcome.   Thank you all for being here.   All familiar  
10 faces.

11          MR. BERTON:   And what I would like to do is start  
12 off on sort of a broader scale in terms of sort of  
13 statewide things.   So that's why we have Dr. Jenkins and  
14 Susan Brown coming up first.

15          (Thereupon an overhead presentation was  
16 Presented as follows.)

17          DR. JENKINS:   Good morning --

18          CHAIRPERSON BROWN:   Good morning.

19          DR. JENKINS:   -- Madam Chair and members of the  
20 Board.   It's a pleasure to be here this morning.   I'm  
21 Bryan Jenkins with the University of California at Davis,  
22 Department of Biological and Agricultural Engineering.  
23 I'm Executive Director of the California Biomass  
24 Collaborative.

25          A new position I've just taken on also is Interim

1 Director of the UC Davis Energy Initiative. So I may be  
2 interested in talking to you about that as well later.

3           Anyway, it's a pleasure to be here this morning.  
4 I do want to acknowledge the Board's participation in the  
5 collaborative and thank you for allowing the participation  
6 of your staff, especially Fernando Berton and many of the  
7 other members of your staff who have contributed.

8           So I'll talk very briefly about the California  
9 Biomass Collaborative, it's current status.

10                               --o0o--

11           DR. JENKINS: I think many of you know what it  
12 is. I'll discuss a little bit about the road map that we  
13 wrote last year. And we're now in the process of writing  
14 an implementation plan for that road map. And so I'll try  
15 to give you some of the details.

16           The executive board for the Collaborative did  
17 meet yesterday and have indicated certain directions about  
18 how they want to proceed with that implementation plan.  
19 And I'd be happy to answer any questions as we go along  
20 here.

21           The Collaborative is a statewide organization  
22 principally funded by the California Energy Commission,  
23 but also receiving Board funding -- thank you very much --  
24 as well as a number of other agencies. And we have some  
25 industry support as well.

1           The Collaborative brings together industry,  
2 government, academia, and the environmental community in  
3 trying to discuss and resolve the issues in sustainable  
4 biomass management and development in the state.

5           And, again, thanks to Fernando for the previous  
6 presentation. Just a small correction on his  
7 presentation. The collaborative resource assessment shows  
8 80 million bone-dry tons, not 80 billion. If we had 80  
9 billion, we wouldn't need any of these petroleum resources  
10 that we're using now.

11           In any case, just to continue along here, if I  
12 can get this thing to work.

13                               --o0o--

14           DR. JENKINS: Well, I'm not sure where we are.

15           Well, that's a good place to be.

16           (Laughter.)

17           DR. JENKINS: Can we get back on the slides  
18 please.

19           Okay. So in terms of the road map, this road map  
20 was prepared as a guidance document for the state. It  
21 outlines a number of recommendations on how to develop  
22 biomass in sustainable waste. The audience is of courses  
23 everybody, I guess. But particularly policy makers like  
24 yourselves as well as the general public.

25                               --o0o--

1           DR. JENKINS: The road map lays out background in  
2 bio-energy and biobased products development, presents  
3 scenarios such as this hypothetical scenario that we might  
4 consider for future development in terms of electricity,  
5 biomethane production, that includes from landfills as  
6 well as other methane producers such as anaerobic  
7 digestion of animal wastes and -- or animal residues, I  
8 should say.

9           One of the objectives of the Collaborative has  
10 been to examine these resources as resources and not so  
11 much as waste. So we really focus on the resource value  
12 of these materials.

13           Also quite a bit of biofuels and the potential  
14 for hydrogen production, which of course will be discussed  
15 in detail a little bit later this morning.

16                               --o0o--

17           DR. JENKINS: The road map identifies five  
18 principal priority -- or priority areas. These are in  
19 resource access and feedstock markets and supply, market  
20 expansion access and technology deployment, research  
21 development and demonstration, of course education  
22 outreach and training. We're certainly going to need many  
23 well trained professionals as we move forward in this  
24 area. And also of course what we're here to discuss today  
25 in terms of policy, regulations, and statutes.

1 --o0o--

2 DR. JENKINS: The priority area for resource  
3 access and feedstock market addresses a number of issues.  
4 I won't go through all of these. You can see some of  
5 these summarize. One of the key ones here is trying to  
6 identify how we actually carry out this development in a  
7 sustainable way.

8 The development of sustainability standards and  
9 best practices for biomass management is going to be key.  
10 The whole issue of life cycle assessment and bringing in  
11 the environmental impacts on a life cycle basis is  
12 extremely important, not just for the conversion  
13 technologies that are frequently discussed but for all of  
14 the biomass management technologies and systems that we  
15 are currently using and may development in the future.

16 --o0o--

17 DR. JENKINS: We have resource monitoring  
18 recommendations, the recommendation on dedicated  
19 bio-energy crops, collection systems logistics,  
20 seasonality and storage issues, commodity -- the  
21 development of commodity markets for biomass, for example,  
22 which don't currently exist, any development of biomass  
23 enterprise zones potentially in association with other  
24 enterprise zones which do now exist within the state to  
25 facilitate some of the permitting and development of these

1 systems.

2 --o0o--

3 DR. JENKINS: We're engaged in some more advanced  
4 modeling, not only in California but across the Western  
5 U.S. The Collaborative is engaged with cooperative  
6 efforts with a number of other agencies and organizations,  
7 for example, with the Western Governors Association to try  
8 to understand optimal siting and biomass resource  
9 potential for bio-energy development across the west.

10 --o0o--

11 DR. JENKINS: We do have tasks looking at  
12 preferred bio-energy crops for the state. We don't really  
13 have good assessments of all these now. They certainly  
14 lack in terms of good fuel data on many of these crops.  
15 Although there's much discussion, and so they need to  
16 understand better what are the real resources for the  
17 future and what crops might we be developing extensively.

18 --o0o--

19 DR. JENKINS: And we have a number of  
20 opportunities in that area as well, including --  
21 remediation of many of the lands through, for example, the  
22 west side of the San Joaquin Valley where we have salt and  
23 drainage impaired lands that could benefit from biomass  
24 production.

25 Market expansion and access. Of course all of

1 these systems that we build will need access to markets.  
2 They'll need to be able to deliver product in a timely  
3 fashion and at costs which are favorable. And so we have  
4 to make sure that we have the infrastructure to do this.  
5 This is true for waste management in addition to the other  
6 biomass resources.

7 --o0o--

8 DR. JENKINS: So we have a number of  
9 recommendations there of course in terms of funding and  
10 incentive mechanisms, regulatory incentives,  
11 infrastructure improvements and access and technology  
12 deployment.

13 --o0o--

14 DR. JENKINS: In terms of RD&D, you can imagine  
15 that there are many different approaches to biomass  
16 development and utilization. This is perhaps the largest  
17 number of recommendations that we have in the report. But  
18 they are focused largely in these areas of resource-base  
19 sustainability and access to the resource, feedstock  
20 processing and logistics, bioscience and biotechnology.  
21 You're aware of course of the recent funding of the Energy  
22 Biosciences Institute under a contract with BP and the  
23 University of California at Berkeley and University of  
24 Illinois. Also the Joint bio-energy Institute, which was  
25 funded just recently by U.S. Department of Energy,

1 including a bio-energy research center for the consortium  
2 between Lawrence Berkeley Laboratory of Lawrence Livermore  
3 National Laboratory and Sandia National Laboratory.  
4 Livermore with partner institutions of Berkeley, Davis,  
5 and Stanford.

6 And so there are a number of recommendations in  
7 that area.

8 --o0o--

9 DR. JENKINS: Education outreach is key. And  
10 it's important to keep everybody informed. That includes  
11 K through 12 education, university education, advanced  
12 university education and public education and outreach and  
13 training. And as I mentioned before, it is important to  
14 make sure we have trained staff to run these systems.

15 Also in policy and regulations and statutes, the  
16 key here has been a focus largely on performance-based  
17 standards, to move away from more prescriptive technology  
18 standards and technology definitions, which are somewhat  
19 restrictive and potentially inhibitive in terms of  
20 innovation by the industry. So I think as much as we can  
21 apply performance-based standards to allow that  
22 innovation, then we'll probably benefit substantially in  
23 this area as well as others.

24 --o0o--

25 DR. JENKINS: I did mention that the board met --

1 the executive board, that is, of the Collaborative met  
2 yesterday to discuss further the implementation plan for  
3 this road map. The road map as it currently stands is a  
4 document with these recommendations. We need to move  
5 forward with how we're actually going to implement these  
6 recommendations if the state chooses to do so.

7           The board identified three principal areas for  
8 which the Collaborative would spend considerable effort.  
9 These are on the sustainability criteria and standards,  
10 trying to actually develop language for standards and  
11 understand how we can put these standards forward so that  
12 they can apply to best practice and see use by the  
13 industry as well as others.

14           The other area was in incentives and Markets, how  
15 we're going to actually provide incentives for this  
16 development, whether they're to industry or others, and  
17 how we're going to identify how these materials can move  
18 through the markets.

19           And of course in permitting and regulation, the  
20 industry is -- you know, it's deeply concerned about the  
21 regulatory situation in California. And we need to  
22 understand how we're going to be able to permit facilities  
23 in the future and how we're going to do this development,  
24 if we choose to do it, so that we can adequately meet the  
25 environmental standards.

1           Some of the issues on waste management of course  
2 that are before us do get back to some of the performance  
3 standards, how we define those. Also in terms of looking  
4 at the current hierarchy -- there was some discussion here  
5 a little bit earlier oh this -- is transformation an  
6 appropriate mechanism for regulating some of these  
7 technologies? Do we need to re-inspect this? There's a  
8 feeling among all of the members of the Collaborative --  
9 although I must admit I shouldn't speak for Fernando  
10 himself -- but there's some concern about the way  
11 regulations influence this development within the state  
12 now, and I think this needs much closer inspection.

13           And we do need to get at this issue of the life  
14 cycle impacts of all of the waste management strategies  
15 that we're currently using and may develop in the future.

16           So I'll stop there. And if there are any  
17 questions, I'd be happy to answer those.

18           Thank you.

19           CHAIRPERSON BROWN: Thank you, Bryan.

20           Any questions at this time?

21           Okay. Thank you.

22           MR. BERTON: Thank you, Bryan.

23           Now, real quickly for -- a real quick  
24 introduction. Strategic Directive 9.3 requires the Board  
25 to play an active role in the statewide bio-energy

1 action -- bio-energy interagency working group. And Susan  
2 Brown is here to talk about the latest in those  
3 activities. And she needs no introduction really.

4 MS. BROWN: Thank you, Fernando.

5 And thank you, Chairwoman Brown and members of  
6 the Board. I'm deeply pleased to be here today. I am  
7 Susan Brown. I'm a senior policy advisor to Commissioner  
8 Jim Boyd from the California Energy Commission. I know  
9 many of you know Jim from his days at the Air Board.

10 And Jim has been given the responsibility for  
11 chairing an interagency working group on bio-energy. And  
12 I must add that both Chairwoman Brown and Fernando and  
13 other staff members have been very active in our  
14 discussions. So it's safe to say that the activities of  
15 the Energy Commission and the Waste Board are very closely  
16 coordinated.

17 But I'm here today to talk briefly about the  
18 status of the State of California's bio-energy Action  
19 Plan. Nearly a year ago, we asked the Governor to sign an  
20 executive order on bio-energy. And he did that at our  
21 urging, setting production and use targets for sustainable  
22 biomass production in California. And I think it's safe  
23 to say that during the last year we've made significant  
24 progress, but much more needs to be done.

25 We're looking at ways to stimulate production of

1 biogas, biopower, and biofuels, not only from our state's  
2 landfills but from the forest residues and our  
3 agricultural waste and certainly our urban green and woody  
4 wastes.

5           It's been a challenge, frankly. We've had nine  
6 agencies involved in our working group. I think we have a  
7 very collegial team approach.

8           On June 11th we held a public meeting.  
9 Chairwoman Brown was present and Fernando. And we  
10 received a lot of input from the larger community, from  
11 local governments, from industry, and environmental  
12 representatives. And two themes really emerged as market  
13 barriers. And they are regulatory certainty and pricing.  
14 And I think this should come as no surprise to many of  
15 you.

16           So what we've done is we've collapsed a number of  
17 specific issues in a document called Progress to Plan,  
18 which is now being discussed within the working group. In  
19 fact, we're holding a conference call this afternoon to  
20 address the issues. And we believe that with input from  
21 all of the agencies, the Air Board, the Water Board, the  
22 Waste Board, the PUC, Food and Ag, all of the agencies  
23 involved, I think we can tackle some of these issues. But  
24 it's not going to be easy.

25           So just some of the highlights that came out of

1 this workshop. In the area of regulatory certainty, I  
2 think it's safe to say that there are a number of agencies  
3 responsible for permitting bio-energy projects. And we  
4 don't always have policies that are closely aligned. For  
5 example, your board's policy to reuse, recycle, and reduce  
6 the waste stream is one that may not always align with the  
7 needs of the solid biomass industry that needs a cheap and  
8 affordable fuel supply. So we continue to hear those  
9 kinds of issues.

10 We are working very closely with Cal EPA and the  
11 Air Board in the climate arena. And I think that with the  
12 Governor's signing of the Executive Order on the low  
13 carbon fuel standard, we'll start to see more biofuels  
14 produced.

15 But we need to have those fuels produced in  
16 California. Right now, we're importing about a million  
17 gallons a year -- excuse me -- a billion gallons a year of  
18 ethanol and -- from the midwest, largely from corn-based  
19 feedstock. We need to make California fuel. We need to  
20 make California fuel from our waste residues. And one of  
21 the important reasons is that some of these wastes have a  
22 very low carbon footprint, especially when you compare it  
23 to imported fuel from abroad or from the midwest. So I  
24 think that's an important message I want to leave with  
25 you. We need to work harder I think on solving some of

1 these issues.

2           A number of other regulatory issues that have  
3 arisen is the need for a multi-media evaluation of  
4 projects, not just the waste issue. But the air, the  
5 water, the waste, and other environmental impacts need to  
6 be looked at in an integrated system approach. Because  
7 only then can we as regulatory agencies begin to make some  
8 hard decisions about tradeoffs. Because you can't have  
9 greenhouse gas reductions and waste disposal always in the  
10 same project. So some hard decisions will have to be  
11 made.

12           And there were a number of suggestions for doing  
13 this. This is not an easy issue, as you know.  
14 Consolidated permitting, coordinated permitting, creating  
15 SWAT teams or green teams among the agencies within Cal  
16 EPA, a number of suggestions along those lines were  
17 suggested. So I think we need to still continue to  
18 discuss and grapple with some of these suggestions and  
19 come up with some specific recommendations.

20           In the area of waste, we did hear a lot of issues  
21 with the alternative daily cover requirements. Again, the  
22 biomass producers will claim that diverting -- using the  
23 green wastes and woody wastes especially for alternative  
24 daily cover diverts fuel that they badly need for power  
25 production.

1           And as you're aware, clarifying some of the  
2 definitions in law regarding waste transformation  
3 continues to be an issue which we're attempting to address  
4 in the Legislature.

5           A notable example this year was the Tahoe fire.  
6 That's a really good lesson in a lost opportunity. Our  
7 group, the working group, came up with a proposal led by  
8 the Tahoe conservancy and the Department of Forest and  
9 Fire Protection to seek state funds for forest thinning  
10 and to use those wastes for a biomass production plant in  
11 the Tahoe Basin. We could not get funding for that budget  
12 proposal this year. Too much competition for Proposition  
13 84 funds apparently. And, again -- and it was only weeks  
14 later that we had this Angora Lakes fire in the Tahoe  
15 Basin. Again, a missed opportunity. We could have used  
16 those forest thinnings for energy production.

17           So we'll continue to work together with your  
18 staff and your board on some of these issues.

19           I could speak briefly about pricing. Most of  
20 those are not issues for your board. The California  
21 Public Utilities Commission is in the process of  
22 finalizing a rule regarding the implementation of the  
23 renewable portfolio standard. There are some issues with  
24 that that there needs to be a way to value the unique  
25 benefits of waste reduction and power production and fuels

1 production, and that has to be incorporated into the  
2 Utility Resource Plan. So we're working with our partners  
3 at the PUC to dig in and try to address some of those  
4 issues.

5 I think biofuels will get a great head start with  
6 the low carbon fuel standard. The Air Board is planning  
7 to complete its rule making by the end of 2008. They have  
8 a new board chair, who's very motivated, I would assume,  
9 to get that done. But the low carbon fuel standard alone  
10 will not allow us to meet the Governor's climate change  
11 goals. We need to do more. We need a plethora of  
12 regulatory and market strategies to achieve the state's  
13 climate change renewable energy and petroleum reduction  
14 goals.

15 So that's the message. The message is we need an  
16 integrated systems approach. We need to do multimedia  
17 evaluation. We need to fund that work. We need to do  
18 that work. And we need to coordinate better among the  
19 agencies to permit bio-energy projects.

20 So thank you very much for having me here. And  
21 I'm very happy to answer any questions.

22 CHAIRPERSON BROWN: Thank you, Susan, very much.

23 Any questions for Susan at this time?

24 Okay. Thank you.

25 I think we're going to probably run pretty much

1 through and then ask questions at the end on the whole --

2 MR. BERTON: If that's your pleasure, yes.

3 The next group of speakers will talk about  
4 specific projects that they have or are involved in,  
5 whether it's their project or they're from a local  
6 jurisdiction.

7 In terms of -- and from a general perspective,  
8 you know, we'll come back later to talk about any  
9 commercialization issues, barriers to commercialization,  
10 and other research needs. But in some of the  
11 presentations, there might be some information about some  
12 barriers that they've encountered. But we'll be coming  
13 back to that later on.

14 So with that, I'd like to introduce Necy Sumait  
15 with Bluefire Ethanol, who will give an update on their  
16 project.

17 MS. SUMAIT: Good morning. My name is Necy  
18 Sumait and I'm Senior Vice-President and a director at  
19 Bluefire Ethanol. In the interests of time I didn't  
20 prepare a presentation.

21 I think it's very progressive for the Board to be  
22 talking about biofuels. And I've been in front of  
23 audiences similar to this for the past decade. And it's  
24 interesting that now on the other side -- you know, people  
25 are actually listening and paying attention and aware of

1 the potential for biofuels, especially with regards to  
2 using our own biomass resources.

3           Bluefire as a company was established -- as a  
4 public company just last year. However, the shareholders  
5 and the founders of Bluefire have been together for the  
6 past 20 years both as Ark Energy and as Arkenol to develop  
7 not only powerplants but cellulose to ethanol projects and  
8 commercializing that technology.

9           Simplistically the technology is based on using  
10 cellulose, any plant-based material. It has a cellulose  
11 polymer. Convert that to sugars. The sugars are then  
12 used for fermentation into other fuels and chemicals just  
13 like, for example, ethanol.

14           You can either use a catalyst or gasification to  
15 break down the cellulose polymer. In our case, instead of  
16 using enzymes as the catalyst, we use acid. So we're  
17 using a concentrated acid hydrolysis approach to break  
18 down that cellulose polymer into its component sugars.  
19 And then the sugars are then fermented to fuels and  
20 chemicals. And ethanol is just one of the products that  
21 could be produced using the technology.

22           Concentrated acid hydrolysis has been  
23 demonstrated and proven a hundred years ago, in war times  
24 when the economies of production was not of great  
25 importance to convert cellulosic materials into sugars and

1 ferment to ethanol as fuel.

2 Arkenol took that proven technology. We  
3 perfected patents and made it more economical for today's  
4 market's application.

5 Arkenol had a pilot facility in the mid to late  
6 1990s in the City of Orange where we perfected the  
7 patents. We optimized the process conditions. We tested  
8 various pieces of equipment and various feedstocks for its  
9 efficacy in the process.

10 In about 2000 the technology was licensed to a  
11 Japanese company, JGC Corporation, and they built and  
12 operated on their own a cellulose to ethanol facility in  
13 Izumo, Japan, for over four years. And on our website,  
14 Bluefire Ethanol dot com, we actually provide a video that  
15 takes you through the facility in Japan and describes the  
16 process in layman's terms. So it's quite informative.

17 COMMITTEE MEMBER CHESBRO: Can I ask, is it still  
18 operating? You said it operated for four years.

19 MS. SUMAIT: The Izumo facility was operated --  
20 it was a pilot facility based on a given task. The  
21 Japanese government wanted to produce ethanol from their  
22 own biomass to test in their vehicle fleet testing  
23 program. When the project was completed, the pilot  
24 facility has been mothballed at this point. And JGC on  
25 their own is deploying the technology in southeast Asia.

1 So we're working with them in collaboration to do  
2 commercial facilities.

3 COMMITTEE MEMBER CHESBRO: Is the Japanese  
4 government planning to take that then and -- now that  
5 they've piloted it?

6 MS. SUMAIT: No. The technology was licensed to  
7 JGC. Arkenol retains the ownership of the patents.

8 COMMITTEE MEMBER CHESBRO: Well --

9 MS. SUMAIT: And they -- right.

10 COMMITTEE MEMBER CHESBRO: They have a pilot  
11 project -- that wasn't my question. The question is: Is  
12 the pilot project going to be turned into a full scale  
13 production, whoever does it, whether it's the government  
14 or --

15 MS. SUMAIT: Oh, it was a standalone for pilot  
16 scale -- special purpose technology. It was basically --  
17 it's not going to be -- that specific facility won't be  
18 upgraded for a bigger facility. They would start brand  
19 new in another --

20 COMMITTEE MEMBER CHESBRO: Is that going to  
21 happen?

22 MS. SUMAIT: Yes. They are looking at now trying  
23 to fund a larger facility.

24 But what Bluefire is doing is basically taking  
25 the experience that we have here in California, JGC's

1 experience in working with the U.S. EPC contractor, MECS,  
2 formerly Monsanto, to bring that know-how and the  
3 experience there to develop the commercial facilities here  
4 in North America, hopefully beginning with California.

5           On the project that we're doing here in  
6 California we're fortunate to be working with Waste  
7 Management, Inc. It's nice to know that there's a company  
8 at the highest level that's committed to looking at  
9 alternative waste, to use the organics that they're  
10 already putting into the landfill and diverting that to  
11 other uses such as for the production of ethanol.

12           So the two projects that we have that are slated  
13 for California, the first is the one you've heard of,  
14 which is the one in Riverside County. It's going to be at  
15 El Sobrante landfill in Riverside County. And that is one  
16 of six projects that the Department of Energy selected to  
17 commercialize the integrated biorefinery. So we're proud  
18 to put California on the map. And we are pursuing, our  
19 company, our negotiations with the Department of Energy  
20 right now to effect that grant. We're beginning our  
21 preliminary approach with the local community for the  
22 siting of that project. And so that project will produce  
23 about 16 million gallons per year of ethanol beginning  
24 with using green waste and wood waste.

25           The technology, as I said, breaks down to

1 cellulose. And there's a lignin component, which is just  
2 the glue that holds the sugar molecules together. That  
3 lignin is high BTU. And so where the jurisdiction allows,  
4 it could be used as a solid fuel to feed a boiler, so that  
5 the biorefinery could pretty much be self-sufficient and  
6 use the boiler fuel to -- the lignin to produce its steam  
7 requirements.

8           We are also -- and for that particular project we  
9 were working with Waste Management. Petro-Diamond, which  
10 is a subsidiary of Mitsubishi, will take the ethanol.  
11 Monsanto and Biochem will be the EPC contractor. And we  
12 are also talking to Colmac about taking -- Colmac Energy  
13 to take the excess lignin so that they can burn it in  
14 their existing biomass plants also in -- in Mecca in  
15 Riverside -- and I believe that's still Riverside County.

16           The second project that we are embarking on is a  
17 project in northern Los Angeles County in the City of  
18 Lancaster. This facility we just filed our use permit  
19 with L.A. County. This is a smaller facility. And the  
20 objective for this facility is look at the modularization  
21 of the technology. And more specifically I think for  
22 smaller market applications like overseas. So that  
23 facility's only going to be three million gallons per  
24 year. It too will use green and wood waste. And it would  
25 be adjacent to the Lancaster landfill in Lancaster,

1 California.

2           We are also -- we've been approached by people  
3 that are interested in biobutanol. So that is of a size  
4 that we could dovetail a fermentation to demonstrate other  
5 chemicals such as biobutanol. So that project is in the  
6 licensing phase. And depending on how quickly we can get  
7 through the process, you know, perhaps the start of  
8 construction by early next year.

9           You know, Fernando talked about there's going to  
10 be a later presentation on the hurdles of  
11 commercialization. And, you know, I'll leave the further  
12 discussion in that topic. But I just wanted to say that  
13 each time we approach municipalities on this is that --  
14 the first question is, does it count? And so I think one  
15 of the major hurdles that need to be addressed is to look  
16 at AB 939 diversion credits and see how -- because we need  
17 the cooperation of the local jurisdiction. And, you know,  
18 they're asking to comply, and so, you know, this is a way  
19 for conversion facilities to take waste that's already  
20 going to landfill to convert that to fuels and chemicals.  
21 So I think on any list that should be at the top.

22           It's nice to see board's leadership in advancing  
23 conversion technologies that produce our homegrown fuels,  
24 like Susan said. And, you know, whereas there could be  
25 other jurisdictions in the nation where you can go through

1 a regulatory process much more quickly, I think  
2 California's a place, a good place to deploy this  
3 technology, because it has a large transportation fuel  
4 market, it has significant biomass resources. California  
5 has led in many ways on environmental stewardship. And so  
6 it is a place where deployment -- a successful deployment  
7 of the technology can really create a meaningful shift to  
8 renewable fuels away from our petroleum fuels. So we're  
9 sticking to it, and hopefully, you know, we can get these  
10 projects on the ground here in California.

11 Cellulose to fuels and chemicals is really at the  
12 intersection of all these policies that we're -- you know,  
13 everyone's talking about now, the low carbon fuel  
14 standard, the goal to try to get organics out of  
15 landfills, creating alternative disposal, alternative  
16 markets for green waste. So I'm hoping that this is the  
17 time when, you know, everyone can get together, not only  
18 in the private sector, the financial sector, but on the  
19 regulatory agencies so that we can really put California  
20 on the map and get this cellulose to ethanol industry  
21 going.

22 Thank you.

23 CHAIRPERSON BROWN: Thank you, Necy.

24 Any questions specific?

25 Okay. Fernando, are you going to introduce

1 Nicole?

2 MR. BERTON: Yes.

3 Thank you, Necy.

4 Next three speakers will be talking about local  
5 government efforts. And I'm pleased to introduce Nicole  
6 Bernson, who's here with the City of Los Angeles and Greg  
7 Smith's -- Councilman Greg Smith's office.

8 (Thereupon an overhead presentation was  
9 Presented as follows.)

10 MS. BERNSON: I'm very happy to be here, also  
11 very happy to see Member Peace back. My boss sends his  
12 personal regards. He wishes he could have been here  
13 himself.

14 As Fernando said, I represent Council Member  
15 Greig Smith. He represents the 12th District of the City  
16 of Los Angeles, home to the Sunshine Canyon landfill, a  
17 hundred million ton landfill.

18 When we was running for election, people said,  
19 "Great, you're not for landfills. What are you for?"  
20 And, hence, the RENEW L.A. Plan was born. RENEW L.A.  
21 stands for "Recovering Energy, Natural Resources, and  
22 Economic Benefit from Waste for Los Angeles."

23 --o0o--

24 MS. BERNSON: At its heart is a zero-waste plan.  
25 It sets the goal of zero waste and provides a blueprint of

1 getting there.

2 --o0o--

3 MS. BERNSON: The key qualities of the plan? Of  
4 course, sustainability, resource conservation, maximum  
5 material recovery, environmental protection, renewable  
6 energy, economic benefit, and environmental justice.

7 --o0o--

8 MS. BERNSON: We have a significant challenge in  
9 Los Angeles; 9.3 million tons of trash per year. Of that,  
10 5.8 million tons are recycled. And that leaves 3.5  
11 million tons that are disposed. And our population is  
12 roughly 3.5 million. So you can do the math on that.

13 --o0o--

14 MS. BERNSON: The RENEW L.A. Strategy is to take  
15 our existing waste resources, utilize our existing  
16 recycling programs, increase those and add additional  
17 recycling programs for our traditional recyclables and  
18 compost, and then to use conversion technology to create  
19 green energy fuels, compost, and biochemicals.

20 --o0o--

21 MS. BERNSON: I'm not going to go into the  
22 different conversion technologies. Fernando did a very  
23 good job of that. But you can see the different  
24 technologies and some of the products that they produce.

25 --o0o--

1 MS. BERNSON: These are some facilities that we  
2 saw on our European tour of conversion technologies. This  
3 is a DRANCO Plant anaerobic digester in.

4 --o0o--

5 MS. BERNSON: And this is a now closed facility  
6 in Germany, a thermal select plant. And very  
7 interestingly, this facility won several architectural  
8 awards. So whoever says they don't want a trash facility  
9 in their neighborhood should maybe reconsider.

10 --o0o--

11 MS. BERNSON: The RENEW L.A. zero-waste target,  
12 this chart assumes a 50 percent --

13 CHAIRPERSON BROWN: Nicole, did you -- why did  
14 the plant close in Germany, just out of curiosity?

15 MS. BERNSON: I believe they could not make --  
16 there were financial reasons for their closure.

17 CHAIRPERSON BROWN: Okay. Thank you.

18 MS. BERNSON: The RENEW L.A. zero-waste target  
19 plan shows our expected growth to 2025; and with the black  
20 being the citywide generation of waste, the green being  
21 the existing diversion programs. And total new diversion  
22 is the red. And you can see that that actually is a very  
23 small portion. So we're looking really to expand and  
24 increase our existing programs.

25 --o0o--

1 MS. BERNSON: The existing programs that we have  
2 are a very successful curbside recycling program, C&D  
3 processing, mixed material MRFing, food waste recycling,  
4 and green waste composting.

5 --o0o--

6 MS. BERNSON: And we're creating new recycling  
7 programs. We have officially launched our multi-family  
8 recycling program. We expect to have a hundred thousand  
9 of our six hundred thousand units on line by December.  
10 We're expanding into business recycling. We've created a  
11 task force on commercial recycling and providing green  
12 business incentives, including tax incentives.

13 We will be looking to industry recycling,  
14 specifically the green building sector. We will be doing  
15 styrofoam recycling, and in fact are already.

16 And we're increasing our collection of universal  
17 waste, not just through our safe centers but we're  
18 involved in the Take-It-Back partnership with many of our  
19 retail partners and are currently exploring e-waste  
20 curbside collection. Also with e-waste we're taking in  
21 our safe centers and have curbside collection for that.  
22 And then the rest we hope to recover through conversion  
23 technology.

24 --o0o--

25 MS. BERNSON: The development plan is very

1 simple. You can see this is a map of the City of Los  
2 Angeles. The circles represent what we call our waste  
3 sheds. There are seven of them. And that's where a yard  
4 is located, a waste yard, in that district that takes the  
5 trash for that area and hauls it to either a transfer  
6 station or a landfill.

7 The plan in RENEW L.A. is that each of those  
8 waste sheds would host their own facilities. So you  
9 have -- the area where the waste is being generated is  
10 also handling their own waste. And we're also looking at  
11 the possibility of partnering with neighboring  
12 jurisdictions.

13 --o0o--

14 MS. BERNSON: We believe that the RENEW L.A.  
15 Program provides cleaner air, less truck traffic, the best  
16 and highest use of resources, green renewable energy, and  
17 will reduce our dependency on foreign oil and fossil  
18 fuels.

19 --o0o--

20 MS. BERNSON: It's also an economic plan, believe  
21 it or not. We hope to create an environmental industrial  
22 sector through the RENEW L.A. Plan. Our current recycling  
23 industries in Los Angeles are over 600 companies, which  
24 are responsible for 8,000 jobs, \$200 million in payroll,  
25 and \$1.8 billion in revenues. And we hope to create many,

1 many green-collar jobs through the RENEW L.A. Plan, which  
2 have a 7-to-1 engineering and construction multiplier and  
3 10-to-1 operational multiplier over landfill jobs.

4 --o0o--

5 MS. BERNSON: We predict that conversion  
6 technologies will be much less expensive than rail haul.  
7 And when looking at diversion versus disposal, the total  
8 sales in value-added impacts are more than doubled, total  
9 income impacts are nearly doubled, and jobs are also  
10 nearly doubled.

11 --o0o--

12 MS. BERNSON: The RENEW L.A. Plan also came with  
13 a list of 13 legislative motions which were submitted when  
14 the plan was introduced in June of '05.

15 This is an update for the key recommendations.  
16 The RENEW L.A. Plan itself was adopted as a council policy  
17 in February of '06. One of the motions was to add food  
18 waste to the green can recycling to further recover some  
19 of our food resources. That -- we have a pilot currently  
20 in development for that. We are modifying our zoning code  
21 to create the use for conversion facilities. That will be  
22 before our planning commission in August.

23 One of the motions asked for us to site and  
24 develop our first and second conversion technology plants.  
25 We have an RFP out right now currently, due back in

1 August, which asks for a commercial facility and also a  
2 developmental facility.

3           We are implementing commercial recycling, as I  
4 mentioned before, and hope to establish the before tax  
5 breaks to encourage resource recovery and green  
6 businesses. We're implementing full multi-family  
7 recycling, establishing DWP green energy producer bonuses  
8 for the energy that comes from the conversion facilities.

9           We're revising the city's procurement policy.

10   This actually speaks to what Mr. Chesbro mentioned

11   earlier, which was the emphasis on reducing what actually

12   goes into the waste stream and creating producer

13   responsibility. We believe that this has to be done on a

14   bigger scale, on the state and federal level. However, as

15   a city, we have a very big pocketbook. We do a lot of

16   contracts. And we seek now to do business with those that

17   look at the ultimate disposal of their materials, the

18   toxicity of those materials, reducing their packaging, and

19   taking back components.

20               This policy was passed by the council and is  
21 funded in the '07-'08 budget and adopting the full  
22 zero-waste policy.

23 --o0o--

24 MS. BERNSON: The City of Los Angeles also has  
25 some complementary policies, legislation, and initiatives.

1 I'll just touch on these very quickly.

2           We have the Green L.A. Plan which was recently  
3 introduced, which seeks a GHG emissions reduction to 35  
4 percent below 1990 levels by 2030. We've accelerated our  
5 RPS goals. It was 20 percent by 2010 -- or 2017. That  
6 was accelerated to 2010. And 35 percent by 2020. And to  
7 convert 100 percent of our municipal solid waste fleet, to  
8 be powered by alternative fuels by 2010. Also, to recycle  
9 70 percent of waste by 2015, up from the former goal of  
10 2020.

11           We have a mayoral directive for the first  
12 alternative technology facility by 2010. We are involved  
13 in a six-year stakeholder process called SWIRP, the Solid  
14 Waste Integrated Resources Plan. We have Blue Bin  
15 programs in 236 L.A.U.S.D. schools, and counting. We have  
16 a recycle-for-dollars program, which is an education and  
17 incentive program that incentivizes our residents for  
18 reducing contamination in their blue bins. We're  
19 expanding our restaurant food-waste collection and have a  
20 residential pilot in development. We're providing rebates  
21 for private haulers against the city's private hauler fees  
22 for loads that are taken to certified processors before  
23 land filling.

24           We're also requiring a minimum lead silver  
25 standard for municipal buildings, which will require a lot

1 of C&D recycling and on-site reuse of materials.

2 Curbside collection of universal waste, we have  
3 legislation introduced to do that. We have a time-certain  
4 reduction in tonnage to the Sunshine Canyon landfill of  
5 zero tons per day by 2011.

6 And newly negotiated recycling contracts which  
7 require all of our vendors to take all plastics, 1 through  
8 7, including polystyrene. And we have found a local  
9 market for our polystyrene. Local markets, folks.

10 And we also have the Commercial Waste Action  
11 Plan, which is dealing with creating a green business  
12 certification.

13 So with that, I'll conclude and be happy to  
14 answer any questions if you have any.

15 CHAIRPERSON BROWN: Go ahead, Wes.

16 COMMITTEE MEMBER CHESBRO: I have several.

17 CHAIRPERSON BROWN: I know.

18 COMMITTEE MEMBER CHESBRO: First of all, several  
19 parallel efforts have been attempted in the past to the  
20 conversion approach that you're suggesting. One was there  
21 was an interest -- and it was a different technology,  
22 which admittedly is not directly comparable. But the  
23 attempt to use incineration as an alternative to landfills  
24 in the past ran into significant public opposition.

25 And then more recently, efforts to site

1 composting facilities, not just in Los Angeles but in  
2 southern California in general have run in to public  
3 opposition, and based on perceptions that its waste -- any  
4 kind of waste processing is bad in our neighborhood  
5 whether it's a landfill or composting or you name it.

6           And so, what would be yours or the councilman's  
7 or the city's perception relative to how the so-called,  
8 you know, NIMBY fear of any kind of waste processing in an  
9 urban setting, how that could be addressed or overcome  
10 successfully that we haven't been as successful in the  
11 past with incineration and composting?

12           MS. BERNSON: Well, thank you for that question.

13           I think one of the very interesting things that  
14 we're doing is a concurrent outreach program that's very  
15 extensive. And also Alex's division is doing the Solid  
16 Waste Integrated Resources Plan, which goes into every  
17 neighborhood in the city and asks them, "What could you  
18 like to see in your neighborhood?" And the counselman for  
19 the last two years has gone throughout the city, including  
20 to neighborhood councils and various outreach groups, and  
21 people have asked more often than not, "Why aren't we  
22 currently doing this?" They do understand the nexus  
23 between the creation of trash and also the ability to  
24 create some kind of energy from recovering those  
25 resources.

1           A lot of groups have asked -- have said, "Why  
2 aren't we doing this?" And I'll give you an example. I  
3 went to a westside neighborhood association about three  
4 weeks ago. And you can imagine that you would expect them  
5 to be big NIMBY's. And in fact the first quarter of the  
6 meeting was all about all the various development projects  
7 that they did not want anywhere near their neighborhood.  
8 However, when I did the RENEW L.A. presentation, they  
9 actually suggested a site where we could site a facility  
10 for them.

11           COMMITTEE MEMBER CHESBRO: Well, not to be a  
12 skeptic, but I would assume most people would say they  
13 really like composting until one is proposed in their area  
14 similarly.

15           MS. BERNSON: Right.

16           COMMITTEE MEMBER CHESBRO: And so the real -- the  
17 rubber really meets the road when it comes time to site a  
18 facility --

19           MS. BERNSON: I have to agree with you on  
20 composting. It's a particular challenge. We do have  
21 facilities that do composting. The AQMD will not permit  
22 open composting --

23           COMMITTEE MEMBER CHESBRO: Oh, I realize that  
24 it's more than NIMBY that has prevented composting from  
25 expanding. So I -- which makes it a little bit of an

1 unfair comparison. But nonetheless, I assume you would  
2 agree that composting has -- in addition to the regulatory  
3 hurdles, has also faced public reaction to people not  
4 generally wanting it in their area.

5 MS. BERNSON: It has. And I think that there are  
6 solutions to those issues, and we do hope to work through  
7 them, because it's very important to return our organics  
8 back to the soil.

9 COMMITTEE MEMBER CHESBRO: The other question  
10 relates to my earlier statement. And, that is, has the  
11 city addressed the question of which material -- which  
12 fraction of the waste stream would be going into the  
13 conversion facilities? And how can we be assured that  
14 it's increasing diversion as opposed to -- and of course  
15 ADC and organics are in a category of their own because  
16 of -- but beyond that question, how can we be sure that  
17 it's not, for example, fiber that could be -- new  
18 cardboard or paper could be made out of as opposed to  
19 conversion?

20 MS. BERNSON: That's a very good question too.

21 What we seek to convert is our -- currently our  
22 black can. We also hope to process that can, which is not  
23 processed now. It's just taken entirely to a landfill.  
24 So what we would like to do -- we have the Recycling  
25 Ambassador Program, which Alex is going to talk about, and

1 also -- we are actually going door to door and telling  
2 residents how to recycle what belongs in what can. So  
3 we're hoping to really reduce what goes into the black can  
4 to begin with. And then we would like to further process  
5 that can before using it for conversion technology.

6 So, you know, the RENEW plan in any case really  
7 attempts to recover every resource possible prior to  
8 conversion.

9 MR. BERTON: Okay. Thank you, Nicole.

10 COMMITTEE MEMBER PEACE: I just wanted to say one  
11 thing. I just wanted to thank Nicole for being here for  
12 that presentation, and just to commend Greg Smith and the  
13 rest of the City Council in L.A. for just the progressive  
14 work that they've done. I think this is wonderful what  
15 you're doing.

16 MS. BERNSON: Thank you very much. And you're  
17 very lucky to hear from Alex Helou, because it's him and  
18 his team that have actually done the work in the trenches  
19 to carry out all of our policy ideas.

20 (Thereupon an overhead presentation was  
21 Presented as follows.)

22 MR. HELOU: Thanks, Nicole.

23 CHAIRPERSON BROWN: Thank you, Nicole.

24 MR. HELOU: Good morning. Alex Helou for the  
25 City of Los Angeles Bureau of Sanitation.

1 I do have some hard copies. I don't know if  
2 you'd like to have some of them.

3 CHAIRPERSON BROWN: Sure.

4 Thanks, Alex.

5 MR. HELOU: Before I start my presentation I  
6 would like to thank Fernando Berton. Fernando has been  
7 very instrumental in helping the City of Los Angeles as  
8 well as the Los Angeles Task Force. He's been tremendous  
9 help in letting us know how things are. And so we keep  
10 good communication with Fernando. And he made my job much  
11 easier this morning because he went over the technology.  
12 So I'm going to be going quickly over them. Plus Nicole  
13 mentioned a lot of the good stuff that's happening in the  
14 city.

15 --o0o--

16 MR. HELOU: The eastside waste shed that Nicole  
17 talked about that basically spread from the top from the  
18 value all the way down to the harbor. And again like  
19 mentioned by Nicole is really environmental justice when  
20 we're looking at all these waste shed to handle their own  
21 trash.

22 --o0o--

23 MR. HELOU: This is a typical house in Los  
24 Angeles, for those who haven't been down in L.A. in a  
25 while. And each house in Los Angeles gets three

1 containers, the black, the blue, and the green. And we  
2 have very great recycling program on the blue as well as  
3 the green. We generate about 1100 tons a day now of  
4 recyclables, as well as we have the green material which  
5 we put all the yard trimming.

6           What's unique about our blue bin is really we  
7 have to take all kind of plastics. It doesn't have to be  
8 clean, rinsed. It JUST has to be -- basically have to be  
9 relatively clean. Doesn't have to be washed or anything  
10 like that. And it really makes it very easy for the  
11 residents to put all the stuff in one bin.

12           Right now we're generating 1100 tons a day. On  
13 July 1st when we started the styrofoam, we went on a  
14 Saturday to the material recovery facilities, the place  
15 where the blue bin goes to. And we found a lot of  
16 styrofoam. So the message is getting out for the  
17 residents to know about what to put in.

18                               --o0o--

19           MR. HELOU: Looking at the city overall, we have  
20 about 62 diversion. We have 37 percent of our waste  
21 generated in the city still going to landfill. Believe it  
22 or not, people don't know in the city that we have 1  
23 percent of our waste that goes already to waste-to-energy  
24 facilities. And that is in actually Long Beach facility.

25                               --o0o--

1           MR. HELOU: Again, this is just a picture of the  
2 recycling material and the truck and the 62 percent.

3                               --o0o--

4           MR. HELOU: A lot of the green material that we  
5 collect in the city is basically used as compost. We put  
6 it in certain sites where residents could come in and pick  
7 it up. Or it's basically land applied. And we have very  
8 successful program. We generate over 500,000 tons every  
9 year of yard trimmings.

10                           --o0o--

11           MR. HELOU: We have an aggressive mayor. Our  
12 mayor basically has designated a few things. One of them  
13 is we have to reach 70 percent recycling by 2015. We also  
14 have to convert our fleet to liquefied natural gas.

15           We have the largest clean fuel vehicles in the  
16 country on the municipal side. We have about 47 percent  
17 right now of our vehicles are running on liquefied natural  
18 gas, and we're growing. We have converted -- on the waste  
19 shed that you saw earlier we have converted four. And we  
20 still only have two. One is under design and one is  
21 actually in the planning stages. So by 2010 we would have  
22 liquefied natural gas in all of the City of Los Angeles to  
23 run our vehicles on.

24           Also, other items that the mayor threw our way in  
25 last few weeks was to reduce the greenhouse gas emission

1 by 35 percent.

2 --o0o--

3 MR. HELOU: We also have RENEW L.A. RENEW L.A.  
4 has, like Nicole mentioned, 13 different items. And so we  
5 see a lot of synergy between what the council wants and  
6 what the mayor is really looking for. So it's really  
7 helped us to decide what is the future for the city and  
8 how to get there. And our goal basically is to reach zero  
9 waste.

10 --o0o--

11 MR. HELOU: Now, looking at the black bin, this  
12 is the black bin that we have 3600 to 3800 tons a day is  
13 going basically to landfill. And when we started looking  
14 at the black bin, we have successful again recycling blue  
15 and green. In the black bin you see that we have paper,  
16 about 25 percent, we have organic material that could be  
17 composted, we have some plastics. Now, we take plastic  
18 bags so that a lot of the stuff could go into the blue  
19 bin. We also have some metals and glass and so forth.

20 So when we looked at the black bin, we notice,  
21 you know, a lot of the stuff could be recycled.

22 --o0o--

23 MR. HELOU: And so what are we doing in the City  
24 of Los Angeles really to meet both the mayor and the  
25 council? We are working on recovering more of the

1 recyclables. There is 400 tons a day of recyclable  
2 material that's sitting in the black bin that could be  
3 moved into the blue bin.

4 We also looking at implementing outreach plan. A  
5 lot of residents we finding in the city they do not know  
6 what goes in each of the bins. They say, "Well, does this  
7 one go in the black? Does this one go in the green?" And  
8 when they're confused they just put them basically in one  
9 container.

10 Also we have a small portion that we understand  
11 from our black bin that cannot be recycled. And that's  
12 where the alternative technologies come in to play. We  
13 think that small portion, instead of going to a landfill,  
14 we could harness the energy that's sitting in it.

15 --o0o--

16 MR. HELOU: This is the Food Waste Program that's  
17 for restaurants as well as the multi-family. And we also  
18 have the schools. In '05-'06 we started with 50. Right  
19 now we have over 236, and it's growing. And what's so  
20 unique about the blue bin is whatever goes in the  
21 residential, you can also put it in the multi-family. So  
22 our contracts with all the privates who are basically  
23 picking up the blue bin from multi-families will accept  
24 the same material that the city single-family residents  
25 can put in their blue bin. For a long time we did not

1 have that program. Now, really we're very excited about  
2 it. There will be a press conference tomorrow in Los  
3 Angeles too basically by the mayor and council members.

4 --o0o--

5 MR. HELOU: This one actually is a positive  
6 article that we just got recently in the daily news. And  
7 it's really -- this one is a private/public partnership.  
8 We have the City of Los Angeles as well as our material  
9 recovery facilities as well as our composing facilities.  
10 And what they did is they put some money into the city to  
11 start this program. And we have what we call the  
12 ambassadors. They go out, they target the highly  
13 contaminated bins in the city. And they educate the  
14 residents about what to go in each of the three bins.

15 They also -- we have generated the new stickers  
16 that goes on each of the container at our residents.  
17 Okay, this one goes in the blue, this was goes in the  
18 black, this one goes in the green. And so people are  
19 finding, "Oh, this is great." And so when the newspaper  
20 was asking some of the residents, "What do you think of  
21 this program?" they said, "Oh, this is awesome. You know,  
22 I didn't know I was doing the wrong thing. I'm glad  
23 they're educating me."

24 And what we feel in the city what we need to do  
25 is two things: One is education and, two, increase

1 recycling. We do not believe in banning things. We think  
2 if there's a capable market for recycling plastics,  
3 styrofoam, it will help the residents to be able to  
4 recycle material more.

5 --o0o--

6 MR. HELOU: This is a solid waste integrated  
7 resource plan. It's a 20-year plan looking for the city.  
8 Again, it's basically to look at all the options that the  
9 city would have to reach its diversion goal of 2030.

10 And why is the City of Los Angeles interested in  
11 alternative technologies? The landfill is a big no-no. A  
12 lot of residents hate it because the leachate comes out,  
13 the gases, the trucks, and so forth. Plus we feel that a  
14 lot of energy that's basically stored in that trash that  
15 could be used as a renewable.

16 Plus the air pollution. And I'll mention --  
17 there's a slide on this one -- how we really can improve  
18 our greenhouse gas reduction by using alternative  
19 technologies.

20 Other technologies -- I know Fernando did a great  
21 job, so this these are some of the technologies in the  
22 City of Los Angeles that we looked at.

23 --o0o--

24 MR. HELOU: We also looked at the European  
25 system. In Europe what they have is the green dot. This

1 way you can tell when material -- a product is recyclable  
2 or not. And what we tried to do in the City of Los  
3 Angeles and we want to work with the state and the CIWMB  
4 Board and -- is to start a blue dot. This way residents  
5 would know when a byproduct -- this product could be  
6 recycled.

7           So this is something that we actually are working  
8 on the city and we hope to be able to work with you to  
9 expand it into the entire State of California.

10           In Germany they're banning land filling. Also a  
11 lot of -- what we also found actually is a lot of the  
12 emerging technologies in Europe like gasification plasma  
13 ark are not working for municipal solid waste. For  
14 example, there's plasma ark in Bordeaux, France, and  
15 they're using the plasma ark for asbestos, not for  
16 municipal solid waste. And so when we were -- that made  
17 it hard for us as we were evaluating all these  
18 technologies. There's a lot of composting and anaerobic  
19 digestion going on.

20           We also notice a lot of the waste-to-energy  
21 facilities have a front-end recycling. This way they can  
22 capture more recyclables up front before it goes through  
23 the process.

24   --o0o--

25           MR. HELOU: This is one of the facilities --

1   pyrolysis facilities in Germany. And basically it takes  
2   about a hundred tons a day to generate about two megawatts  
3   of power. And it's basically located in close proximity  
4   to residential units.

5                               --o0o--

6               MR. HELOU: This is a waste-to-energy facility.  
7   Again, you know, the design of these facilities are  
8   important. When we talk to residents, nobody wants them.  
9   But when they say, "You know what, you're going to handle  
10  your own waste. This is the waste shed." Environmental  
11  justice issue, and so it become more and more acceptable  
12  because now they have to take responsibility for what  
13  they're generating.

14              And what this facility has about it is basically  
15  extensive recycling. They claim about 92 percent of the  
16  material that they have is recycled.

17                               --o0o--

18              COMMITTEE MEMBER CHESBRO: Those last two were  
19  incinerators though essentially, right? They were not  
20  fuel production facilities?

21              MR. HELOU: The first -- actually the one in  
22  Germany is a pyrolysis facility. And this one is  
23  basically indirect heat in the absence of oxygen.

24              COMMITTEE MEMBER CHESBRO: Okay.

25              MR. HELOU: This one is actually a

1 waste-to-energy and what we call advanced thermo  
2 recycling. It has an advanced -- it uses oxygen, but  
3 there's advanced treatment processes at the end where it  
4 captures all the carcinogenics and toxic air contaminants  
5 that comes out from that facility.

6 This is a digestion plant. And you've probably  
7 seen a lot of those anaerobic digestion.

8 --o0o--

9 MR. HELOU: This is really interesting piece,  
10 because it talks about how the Europeans are doing with  
11 their recycling. You can see, let's say, for example,  
12 from Netherlands all the western European nations. They  
13 have high recycling rates. Plus they supplement that with  
14 thermal recycling. It goes from 33 to about 50 percent in  
15 Sweden.

16 And so -- and you look at the eastern Europeans  
17 there's basically the -- they're more dependent on  
18 landfills. But this one, as I believe mentioned by  
19 Fernando, is going to be changing because of the European  
20 Union regulations.

21 --o0o--

22 MR. HELOU: These are some of the pyrolysis and  
23 gasification plants that are operating in Japan and the  
24 rest of Asia. And they basically process municipal solid  
25 waste.

1                               --o0o--

2               MR. HELOU: Our objective again, the City of Los  
3 Angeles, is really to increase landfill diversion,  
4 create -- capture the energy being socially acceptable as  
5 well as economical.

6               These are the thermal technologies. And you can  
7 see the Burger King next to a digester.

8                               --o0o--

9               MR. HELOU: This is actually how the process  
10 works, the pre-processing where you capture a lot of the  
11 recyclables. Then you go through alternative technology.  
12 And you have to produce electricity chemicals.

13                              --o0o--

14              MR. HELOU: This is a study actually that we did  
15 as part of our study in the City of Los Angeles with RTI.  
16 This is a program that's ten years in development with  
17 EPA. And what happened is we compared our current  
18 operation -- you see on the top line, the black bin -- 50  
19 percent of the trash we collect, the 3600, goes directly  
20 to the landfill. The other 50 percent goes to a transfer  
21 station. So we compared the emissions from our current  
22 operation to a process if we use advanced thermal  
23 recycling facility. Fifty percent will go directly the  
24 advanced thermal recycling, 50 percent will go to transfer  
25 station.

1 --o0o--

2 MR. HELOU: And these are actually the results  
3 quickly of the energy consumption. There is a --  
4 basically a lot of savings of generation of energy with  
5 advanced thermal recycling, gasification, and anaerobic  
6 digestion versus the landfill.

7 --o0o--

8 MR. HELOU: On the -- also on carbon monoxide,  
9 sulfur oxide, nitrogen, particulate matter, that also  
10 shows there is a lot of benefits from using those  
11 alternative technologies in compared doing business as  
12 usual.

13 --o0o--

14 MR. HELOU: Phase 1 was completed. We evaluated  
15 over 200 technologies. We basically end up about 17 of  
16 them that really met all the criteria. And those criteria  
17 were -- basically we compared them based on how much  
18 tonnage they can process, how much electricity is  
19 generated, what's the cost, what are the air emissions,  
20 and are they operating and what revenues can be generated.

21 --o0o--

22 MR. HELOU: In Phase 1 our summary was the City  
23 of Los Angeles should go ahead and proceed with an  
24 advanced thermal recycling facility or an alternative  
25 technology as well as look also at biological and chemical

1 conversion technologies.

2 And the last two, you see this is actually linked  
3 to our website with alternative technology. This is  
4 actually \$500,000 report. So you save some money by  
5 reading.

6 (Laughter.)

7 MR. HELOU: The site visit, Councilman Greg Smith  
8 actually led the team from the city to look at these  
9 technologies in Europe to see exactly are they working,  
10 they're not, what's the challenges they have. And I'll  
11 tell you guys a secret now. Our mayor is actually  
12 planning to visit Europe also in the next couple months.  
13 And we have -- the Bureau Sanitation have prepared a  
14 report for him and some of the facilities that he could  
15 view in Germany as well as Denmark.

16 --o0o--

17 MR. HELOU: Implementation. Currently we have  
18 the RFP -- the RFP is on the street. The deadline is  
19 February -- deadline is August 22nd. And we are looking  
20 for two types of facility. One of them is commercial,  
21 looking between 200 to a thousand tons a day. And other  
22 one is basically emerging technology, less than 200.

23 Our options actually are -- we made it very  
24 flexible for both the proposers, is that they could either  
25 bid on design, build, own, and operate the facility, or

1 the city could through L.A. DWP or other city department  
2 could finance part of the project. So we're waiting for  
3 the proposals. I know we're going to get really some good  
4 ones.

5 As RFP is on the street, we're also looking for  
6 sites. Where do we put these facilities in the City of  
7 Los Angeles? We started with over 1,000 sites. And we  
8 have one through the elimination process, whether they are  
9 next to schools, hospitals, residential. And so as we  
10 went down through those, we had a -- I think we have about  
11 now a dozen of these sites that are capable of placing a  
12 facility. That list actually will be presented to our  
13 board of public works and then to the city council.

14 --o0o--

15 MR. HELOU: This is quickly our timeline. We  
16 will get the proposals in February. And we're doing their  
17 evaluation. We got to do mass/energy balance, confirm all  
18 data is accurate. And then we hoping to start  
19 commercialization of our operation by 2011.

20 --o0o--

21 MR. HELOU: What are the challenges the city of  
22 Los Angeles facing? This is really I think what was  
23 touched on by a lot of the speakers. The statutory thing  
24 is a big issue for us. It's about these technologies.  
25 Regulations framework is not really well coordinated, we

1 believe. The siting, permitting process is complex. We  
2 are doing our part in the city by defining alternative  
3 technologies, defining how these process are, where you  
4 can site them, what zoning. But also I think we need that  
5 to be done at the state level.

6           Alternative technology may not proceed  
7 economically at this point. But if we look at 2010, 2011,  
8 they become very competitive. Plus the generation of  
9 electricity, it's really I think -- they're going to make  
10 them more competitive than land filling. And as we go out  
11 and we're talking to residents, there's a lot of limited  
12 public awareness of the benefits of these alternative  
13 technologies. So that's something actually we are  
14 undertaking in the city.

15                               --o0o--

16           MR. HELOU: Now, how can you guys help us? There  
17 is only about six bullets. But we have to basically I  
18 think develop a language. What is alternative technology.  
19 We need a scientific understanding of it. And AB 939,  
20 divergent credit, that's really important. I think, like  
21 you saw in the Europeans, they really have 30, 40, 50  
22 percent that's going through this alternative  
23 technologies. And I think we in the State of California,  
24 we need to be the same way. We still have a successful  
25 recycling program where we're generating, you know, 1100.

1 Then we got to go up to 1600. Plus I have -- we have 1800  
2 tons a day of recyclable green material. But that small  
3 element that's going to remain in the black bin, that need  
4 to go to alternative technology. And we should be  
5 recovering the divergent credit.

6 We also think we need to be a streamline of  
7 framework between CIWMB, CARB, CEC.

8 COMMITTEE MEMBER CHESBRO: Can I ask with regards  
9 to the 939 credit, since most of the jurisdictions --  
10 let's assume for the moment that the Senator Padilla  
11 approach of using the existing model is not operative, and  
12 may become so but for the moment that it's not. Why would  
13 the diversion credit matter to the majority of the  
14 jurisdictions in the state who have already achieved 50  
15 percent?

16 MR. HELOU: I --

17 COMMITTEE MEMBER CHESBRO: In the City of L.A.  
18 specifically, who are well above 50 percent.

19 MR. HELOU: In the City of Los Angeles we're over  
20 62 percent -- we're over that, but -- and that's why we're  
21 proceeding right now even with no diversion credit. The  
22 thing is for the future. If we've got to go what we  
23 call -- it's got to be zero waste. I think that  
24 percentage is really important for us to capture, because  
25 you are taking the material, you're converting it to

1 energy, the green energy, which is being reused.

2 COMMITTEE MEMBER CHESBRO: I understand the  
3 larger rationale. I'm just trying to figure out the  
4 specific mechanism.

5 CHAIRPERSON BROWN: I think the specific question  
6 is: Your statutory obligation is 50 percent and you've  
7 already achieved that, so why do you need additional  
8 diversion credit? If you've achieved your statutory  
9 mandated 50 percent diversion credit, it really doesn't  
10 matter if you go from 62 to 75 percent. I mean it's a  
11 number on paper. Is that your question?

12 COMMITTEE MEMBER CHESBRO: Yeah.

13 CHAIRPERSON BROWN: Diversion credit really is an  
14 issue because the mandate currently is only 50 percent.  
15 Just a question.

16 MR. HELOU: I think --

17 CHAIRPERSON BROWN: I mean -- it's been running  
18 around for a long time. And I think it's an interesting  
19 question to start contemplating as we do have new  
20 legislation pending. However, it's not an issue currently  
21 before, for instance, the City of Los Angeles because  
22 you've met your statutory obligation.

23 MR. HELOU: I guess -- I'm sorry.

24 COMMITTEE MEMBER PETERSEN: No, I've got another  
25 question.

1           COMMITTEE MEMBER CHESBRO: And let me just  
2 complete then by saying that if of course we do continue  
3 the existing model of diversion credit as the mechanism,  
4 then this question is an important and relevant one  
5 legislatively, but I think probably for the vast majority  
6 of jurisdictions only if that's the case. Because if  
7 that's not the mechanism, then I don't see that as a  
8 central legislative question myself.

9           MR. HELOU: You know, like in the City of Los  
10 Angeles the way we approached it is that we have a  
11 successful recycling program and we want to expand that  
12 recycling program. And we did not want alternative  
13 technology to come at the expense of the blue bin, or  
14 recyclables, or the green material. So our approach was  
15 basically we want to target the black container. But the  
16 way we look at it is that there is energy that's stored  
17 inside the black bin and that energy needs to be  
18 recovered.

19           COMMITTEE MEMBER CHESBRO: I completely  
20 understand the rationale for going towards -- in this  
21 direction --

22           CHAIRPERSON BROWN: I don't think we're arguing  
23 with your goals or the desire to get to zero waste. I  
24 don't think that's the question. And I don't necessarily  
25 know that there's an answer that would put you on the spot

1 to give today, because it is definitely a political  
2 football and we would never put you in that position -- or  
3 Nicole. But --

4 COMMITTEE MEMBER PETERSEN: Because L.A. has big  
5 footballs.

6 CHAIRPERSON BROWN: Yeah. I think it's more just  
7 a statement as opposed to a question that we're seeking an  
8 answer to, is -- you know, we continually are besieged  
9 with the diversion credit question, and L.A. has gone well  
10 beyond a lot of the jurisdictions and you continue to move  
11 forward and the new L.A. plan is, you know, a phenomenal  
12 road map for how to get to zero waste. So I don't think  
13 we're questioning that. I think it's just, you know, a  
14 statement that we want to ponder.

15 COMMITTEE MEMBER PETERSEN: They're the good  
16 guys.

17 CHAIRPERSON BROWN: Yes.

18 COMMITTEE MEMBER PETERSEN: Alex, a question. On  
19 the black bin and the second cut, when you put this  
20 through, let's say, a dirty MRF, what is the city  
21 anticipating as a recovery rate on the black bin going  
22 through that MRF before you go to conversion technology?

23 What do you think you're going to recover out of  
24 that?

25 MR. HELOU: We have the Ambassador second program

1 which going right now. We believe at least there's 400  
2 tons a day of recycled material sitting in right now.  
3 There --

4 COMMITTEE MEMBER PETERSEN: So you're looking at  
5 maybe anywhere in a range from 7 to 15 percent, somewhere  
6 in there?

7 MR. HELOU: To take out? Well, this is actually  
8 a tough question, because we have the food waste program  
9 that Nicole mentioned. That will take the organic portion  
10 out. And if we take the plastics out, really we end up  
11 only with a small portion, maybe -- we should be left with  
12 about 1500 tons a day in the black bin.

13 All right. Thank you.

14 COMMITTEE MEMBER PETERSEN: By the way, it's a  
15 great program, and you guys are just rocking. It's great.

16 MR. HELOU: I think somehow we stopped the  
17 presentation.

18 COMMITTEE MEMBER PEACE: I think we sometimes  
19 talk about diversion, our -- you know AB 939 diversion  
20 credit. Right now you can get 10 percent diversion credit  
21 for burning biomass, but you can't get the 10 percent  
22 diversion credit for conversion technology that would turn  
23 that into fuels or -- so that's --

24 MR. HELOU: I say we do get the 10 percent when  
25 we send it down. Okay. We always will value partnership

1 with the -- and funding opportunities.

2 And the last -- my two last bullets deals with  
3 reclass analysis of all the solid waste management  
4 scenarios, and as well as promote public awareness.

5 --o0o--

6 MR. HELOU: And if you have any questions, that's  
7 my contact. And, again, there's website for alternative  
8 technology report.

9 COMMITTEE MEMBER CHESBRO: I want to join my  
10 fellow Board member in just praising the heck out of the  
11 City of L.A. and its leadership. It's really a leader  
12 around the globe in terms of the level of effort that's  
13 been put into this reducing the waste stream.

14 MR. HELOU: Thank you very much, Alex.

15 CHAIRPERSON BROWN: Thank you very much, Alex.

16 Any other questions before we move to the next  
17 group?

18 Thank you all very much for being here and for  
19 your presentations and just everything you guys are doing.

20 COMMITTEE MEMBER CHESBRO: I do have a general  
21 question for the staff. And maybe it's going to be  
22 addressed, and so I'll hold it if it's going to be  
23 addressed by the next group of speakers.

24 But, Fernando, implicit in the idea that the  
25 previous experience with incineration was not for the most

1 part successful, with a few exceptions, implicit in this  
2 idea is that -- I think, that there is less in the way of  
3 emissions particularly with regards to toxics, such things  
4 as -- in the metals and things that have been  
5 controversial with regards to a -- or a question mark  
6 anyway that has helped to hold back the development of  
7 consideration of technology as a widely used method.

8           Is there a generalized statement that can be made  
9 about these various technologies that in fact they -- the  
10 conversion to fuel first before it's used for some -- or  
11 it's combusted for some energy producing purpose is in  
12 fact less -- has inherently fewer problems than  
13 incineration does?

14           MR. BERTON: I'm pondering --

15           COMMITTEE MEMBER CHESBRO: It's a very broad  
16 question. It's a very broad question and it may not be an  
17 easy one to answer, because we're talking about various  
18 technologies.

19           I mean with regards to assuring -- being able to  
20 assure the public that there are not emissions that are  
21 potential threats to public health or the environment.

22           MR. BERTON: I think it's very tough to  
23 generalize, because the specific technologies use specific  
24 processes and the technologies -- the air pollution  
25 control technologies or the technologies for the solid

1 residue management could differ. And a lot of it depends  
2 on feedstock as well that is used. So I would be hesitant  
3 to make a generalization.

4 I am comfortable in saying that the data that  
5 I've seen from some of the site visits and even, you know,  
6 talking to regulators -- this is specific to the  
7 energy-side of things -- that the emissions are very, very  
8 clean; cleaner in some cases than some of the tailpipe  
9 emissions from the vehicles.

10 Now, as far as biofuels production, I think it's  
11 probably difficult to say because there aren't that many  
12 biofuels production facilities operational right now. So  
13 I don't think there's that body of knowledge. And I would  
14 actually probably at some point defer to Dr. Jenkins or  
15 Rob Williams from the biomass collaborative, you know,  
16 during that portion of the presentation. They can  
17 elaborate on that.

18 But from my perspective, I don't think there's a  
19 body of knowledge yet for biofuels, but there is for the  
20 energy production. And the emissions show that they're  
21 very, very clean.

22 COMMITTEE MEMBER CHESBRO: Relative to the  
23 public -- widespread public acceptance, that's a key  
24 question with each of these technologies, is the degree to  
25 which the public can be convinced that a particular

1 facility is not going to be harmful to their health or to  
2 the environment. And I'm not saying it is. I think --  
3 I'm sure that there's lots of evidence that this can be  
4 done in a very responsible way. I'm not saying -- but,  
5 nonetheless, the earlier question of the City of L.A.  
6 about the political problems of siting, there's a very  
7 strong linkage between the public's response to a facility  
8 and the public's confidence that it in fact is a safe  
9 facility to have in their community.

10 MR. BERTON: Our next speaker, Coby Skye, I think  
11 could reinforce some of that from the site visit that he's  
12 taken of the L.A. County projects. So with that, I'll  
13 just turn it over to Coby.

14 (Thereupon an overhead presentation was  
15 Presented as follows.)

16 MR. SKYE: Thank you very much.

17 Good morning, Madam Chair and esteemed members of  
18 the Board. It's my pleasure to provide a presentation on  
19 the county's efforts to promote alternatives to disposal  
20 and also our demonstration project for conversion  
21 technologies.

22 And, again, I want to thank Fernando for covering  
23 a lot of the information on the projects themselves. So I  
24 can kind of blaze through some of the overview on this  
25 conversion technology and focus more on our project and

1 what we learned from our firsthand site visits for  
2 operating facilities as well as what our progress is up to  
3 now and our next steps.

4 --o0o--

5 MR. SKYE: And if I can make just a small request  
6 from the Board. If we can clone Fernando. He's involved  
7 with the Alternative Technology Subcommittee and the  
8 various state groups as well as all the work he does on  
9 the Board, and he's just been fantastic.

10 Briefly I want to talk about why the county has  
11 been focusing on promoting conversion technologies. I  
12 think that we're being driven by a number of issues:  
13 First of all, the energy crisis; concerns about pollution;  
14 increase of cost of fuel; climate change, which is a very  
15 significant issue; and also continuing to need to manage  
16 waste in a safe and appropriate manner. I think we're  
17 also seeing an increase in consciousness from the public  
18 about conservation and sustainability and the need to be  
19 better stewards of our resources.

20 --o0o--

21 MR. SKYE: When we talk about conversion  
22 technologies, we're talking about any process that can  
23 convert residual waste into fuels, products, and energy.

24 --o0o--

25 MR. SKYE: And Fernando talked about the variety

1 of different technologies that are currently operating.  
2 From the county's perspective, we are not looking at  
3 combustion or incineration. Instead we're focusing on the  
4 variety of other technologies, such as pyrolysis,  
5 gasification, acid hydrolysis, anaerobic digestion, and  
6 thermal depolymerization. And we've seen all the  
7 information about operating facilities overseas, but we  
8 don't see one in commercial stage yet.

9           Some of the benefits of these technologies as we  
10 see them, the ability to manage its biomass. This is a  
11 very important issue for Los Angeles County where we're  
12 running out of landfill space. We're already exporting 20  
13 percent of the waste out of the Los Angeles County basin.  
14 And we're going to see that number increase significantly.  
15 And Puente Hills landfill, the largest landfill in the  
16 country, closes in 2013 and other local options for waste  
17 management close.

18           We also look at a substantial benefit of  
19 conversion technologies are to produce renewable energy  
20 and fuels and promote independence from foreign oil.

21                               --o0o--

22           MR. SKYE: We're turning a liability, which is  
23 solid waste, into a valuable resource in a local manner,  
24 creating green-collar jobs, a phrase that I borrowed from  
25 Greg Smith's RENEW L.A. Plan, in reducing our green gas

1 emissions, which is a very significant issue as we start  
2 grappling with climate change. And this is just a list of  
3 the various different products that we can recover from  
4 waste if we utilize conversion technologies rather than  
5 lengthening them.

6 --o0o--

7 MR. SKYE: It's also important to note that  
8 conversion technologies play a role in a number of  
9 California statewide goals, including AB 32, the renewable  
10 portfolio standards; the low carbon fuel standards; the  
11 buy-energy action plan; energy security; the hydrogen  
12 highway; and obviously solid waste disposal capacity and  
13 landfill reduction, which are continuing goals for AB 939.

14 --o0o--

15 MR. SKYE: When we talk about all the benefits,  
16 the natural question is: Why haven't we seen more  
17 conversion technologies develop in California? And I  
18 think there's three primary issues.

19 The first is cost. Landfill disposal is still  
20 relatively cheap in California. In southern California  
21 the going rate is about 28 to \$35 per ton. We're going to  
22 see that number significantly increase as we move towards  
23 rail hauling our waste and exporting it to more remote  
24 landfills.

25 We also have significant regulatory and statutory

1 hurdles. And if there was one thing I would urge, it's  
2 assistance on that front. Currently we're seeing the  
3 gasification technologies, with very specific  
4 requirements, that are not technically feasible and  
5 inaccurate. And so it makes it an impossible barrier to  
6 overcome.

7           The third issue is misconceptions. There is a  
8 perception that there's high emissions from conversion  
9 technologies. From our firsthand evaluations and also  
10 from data that we have -- Karen just gave me a copy of the  
11 South Coast AQMD results for her facility in Riverside  
12 County. It shows that they meet compliance. South Coast  
13 AQMD has some of the most stringent air quality  
14 regulations of anywhere in the country, and even compares  
15 with European and Japanese standards.

16           So in answer to Senator Chesbro's question:  
17 We're very confident that conversion technologies can meet  
18 any emissions requirements that can be put forward. And I  
19 think the question is that -- facilities that aren't able  
20 to meet those standards will not be permitted. So I think  
21 that's the most direct answer to that question.

22           COMMITTEE MEMBER CHESBRO: But there's an  
23 intersection between regulatory requirements and public  
24 perception. I mean those are two pieces to getting  
25 successfully sited. And you can have the regulators say

1 you meet all standards and have a roomful of really angry  
2 community representatives and still go down in flames.  
3 I'm sure anybody at the local level knows that.

4 MR. SKYE: Absolutely. And I'll talk a little  
5 bit more about that too later in the presentation.

6 But I did want to talk briefly about what the  
7 county has been doing to try and overcome some of these  
8 hurdles.

9 --o0o--

10 MR. SKYE: We've been promoting alternatives for  
11 over a decade now. And we have a simultaneous strategy,  
12 first of all, to try and implement changes in legislation  
13 and regulations, but also to develop a demonstration  
14 project so that we can showcase what the technology's  
15 actual performance is and answer the questions we've  
16 consistently had about what the data, what the emissions  
17 are from these projects, what they'll actually look like.

18 We developed our Alternative Technology Advisory  
19 Subcommittee. We're happy to have the Waste Board  
20 participation through Fernando on that, as well as other  
21 government officials and regulators and members of the  
22 community, which are very supportive of seeing  
23 alternatives to landfills and some of these technologies  
24 develop.

25 --o0o--

1           MR. SKYE: About two years ago we developed our  
2 evaluation report, which laid out a step-by-step plan for  
3 developing a demonstration facility. And I think there's  
4 a very important need to develop something in southern  
5 California so that we can validate the technical,  
6 environmental, and economic feasibility of these  
7 technologies. We need to make sure that conversion  
8 actually makes sense for California. We believe it is,  
9 the data points to it, being a necessity. But until we  
10 build one, we really can't answer that question.

11           We're also hoping that these demonstration  
12 projects will be a showcase for interested parties. We've  
13 had a lot of interest from throughout the country in  
14 seeing how conversion technologies develop here. For  
15 example, New York City we met with officials there. And  
16 they've developed a plan that allows them to take  
17 additional time in evaluating these technologies and also  
18 to see what happens in California before they commit to  
19 developing conversion in New York.

20           It's an important distinction that California  
21 continues to lead the way in developing new technologies  
22 and being the leader in environmental protection.

23           And I think the last thing is that once we have  
24 that tangible data for future development, we can develop  
25 our regulations that make sense based on how these

1 technologies actually perform.

2 Another important perspective from the county's  
3 project is that we're exclusively looking to co-locate  
4 conversion technologies with materials recovery  
5 facilities. And there are a number of important reasons  
6 for that.

7 --o0o--

8 MR. SKYE: First, we have the availability of  
9 land for the development of the demonstration project.  
10 We're also looking at a readily available feedstock that's  
11 left as a residual waste from the MRF processing. The  
12 MRFs can also pre-process the material so that it's  
13 suitable for conversion. There's appropriate zoning  
14 already in place at a MRF location. And you have  
15 environmental benefits from reducing transfer truck  
16 traffic and producing fuel and energy on site.

17 Another important distinction is that we're  
18 specifically looking at feedstock that would otherwise be  
19 disposed, and most typically disposed at a remote landfill  
20 that's trucked a long way. So in order to reduce disposal  
21 and reduce transportation impacts, we see a lot of  
22 benefits for co-location.

23 --o0o--

24 MR. SKYE: The strategy for the county's project  
25 is a public/private partnership with a MRF operator.

1 Provides both the feedstock and the location that's based  
2 for developing the project. The technology supplier would  
3 provide the expertise to develop the project as well as  
4 the financing. And Los Angeles County would provide  
5 assistance in permitting the project and providing  
6 technical support, public outreach support, and assist in  
7 procuring grants that may be useful from a public entity  
8 that's involved in the project.

9 --o0o--

10 MR. SKYE: Our funding for this project is  
11 relatively limited. We placed conditions on local CUPs  
12 for landfills within the unincorporated areas of the  
13 county to provide direct funding for our project, as well  
14 as a small portion of our solid waste management fees. So  
15 we've spent approximately \$4 million. And I think it's an  
16 important value to be able to leverage the development of  
17 a larger scale facility that will cost on the order of 50  
18 to \$100 million.

19 --o0o--

20 MR. SKYE: The technologies we found through our  
21 evaluation process, we now have narrowed it down to five  
22 specific technologies. You can see that there's a mix of  
23 biological, chemical, and thermal processes. And that's  
24 intentional. We're hoping to move forward with more than  
25 one different technology and highlight the different

1 strengths and weaknesses of different technologies.

2 COMMITTEE MEMBER DANZINGER: The one that you  
3 referenced earlier that South Coast had looked at, what  
4 type of operation was that?

5 MR. SKYE: That is international environmental  
6 solutions. It's a pyrolysis.

7 COMMITTEE MEMBER DANZINGER: Thanks.

8 MR. SKYE: We've also identified five material  
9 recovery facilities, and they're located throughout  
10 southern California. They've been partners in our  
11 conversion technology project and are very interested in  
12 developing a project at their sites.

13 --o0o--

14 MR. SKYE: And I think it's important to note  
15 that only one of the five is actually located in Los  
16 Angeles County. The reason for that is the county sees  
17 solid waste management as a regional issue that we need to  
18 start working together to address. And the long-term  
19 objective is really to see that these technologies are  
20 viable and nudge the private sector to develop more  
21 facilities in the future. Once we show that we can do  
22 this and bridge that valley of death for new development,  
23 we're hoping the private sector will take the lead.

24 Also I wanted to mention some of the benefits of  
25 our project specifically in visiting reference facilities.

1 One of the requirements for our project is that the  
2 technologies have an operating facility with a pilot scale  
3 or larger that uses MSW or closely related feedstock and  
4 has a proven track record of operation.

5 I think this is a critical due-diligence step for  
6 our process in making sure we have the level of confidence  
7 that these projects operate the way they state.

8 --o0o--

9 MR. SKYE: Specifically one of the benefits for  
10 visiting these sites is to look at the feedstock that's  
11 used by these facilities and see what are the differences  
12 between this feedstock and what we will probably see  
13 coming out of the back-end of the MRFs that are partnering  
14 with us. And there are important differences depending on  
15 the recycling programs being implemented locally, other  
16 regulations and requirements, and contamination and other  
17 issues.

18 --o0o--

19 MR. SKYE: We're also able to evaluate the  
20 products and byproducts from the technologies and see how  
21 applicable they might be. We've seen here, on the bottom  
22 left is the compost-type material that's coming out of the  
23 aerobic facility. In the middle is essentially an RDF  
24 product that's the residue from MRF processing for the  
25 facility that's fed to their gasifier. And at the end it

1 is actual steps made from the aggregate remaining from a  
2 gasification facility in Japan.

3           So you can see a great closed loop from their  
4 products.

5                               --o0o--

6           MR. SKYE: We're also able to assess interface  
7 issues. We know that we're going to be co-locating with a  
8 materials recovery facility, so it's critical to make sure  
9 that the feedstock coming from the MRF is pre-processed  
10 adequately in order to be able to feed into the conversion  
11 process without creating other issues.

12                              --o0o--

13           MR. SKYE: And we're able to meet with local  
14 regulators and stakeholders, talk with them about how they  
15 regulated the facility, what challenges they experienced  
16 when they were first developing the project. And also  
17 talk to the community and ask them how is it that they  
18 were able to accept the facility, what concerns they had,  
19 and how those were addressed. And I think that's  
20 incredibly valuable to us as we move forward with our  
21 project.

22                              --o0o--

23           MR. SKYE: Some of the lessons we've learned, for  
24 example, we saw in Japan that there's a very high  
25 discipline culturally in recycling, that there's an

1 incredibly high participation rate, and they also have  
2 very sophisticated programs. They have high levels of  
3 separation for a variety of different products. They  
4 think it's something that the U.S. really wouldn't  
5 feasibly be able to develop, just because people have been  
6 used to one bin for all the recycling and making it easy  
7 for people. And even now we still have relatively high  
8 contamination rates on a very -- on a relatively low  
9 participation rate.

10           However, Japan still relies on waste-to-energy  
11 and conversion technologies in order to manage the  
12 materials that are left over. And what I learned from  
13 that is that we'll always have residual waste and we need  
14 to find more effective ways of managing that material.

15           It was also interesting to see there are very  
16 high landfill taxes throughout Europe and Asia, 50 to \$75  
17 per ton. It's a significant economic driver on top of the  
18 high disposal costs for landfills, which are very few and  
19 far between and shrinking day by day overseas. And I  
20 think that's where we're headed to. Our dollar forty per  
21 ton is pretty modest in comparison. But I think we need  
22 to think about driving the economics for new technologies.

23           The other interesting thing that I saw in Japan  
24 was a head-to-head comparison of your more traditional  
25 waste-to-energy and new thermal conversion technologies.

1 And we saw that the emissions were in order of magnitude  
2 lower for conversion technologies. We saw that the ash  
3 that was produced from traditional waste-to-energy was  
4 considered a hazardous material in Japan. But some of  
5 that ash was actually fed to conversion technologies in  
6 Japan, which were able to recover additional energy and  
7 products from it and render it to be an inert slag  
8 product.

9 We also saw a very flexible end product from the  
10 conversion technologies. That wasn't the case for  
11 traditional waste-to-energy.

12 So it reinforces the county's perspective that we  
13 need to look at conversion technologies as the next  
14 generation technology. It's not your traditional  
15 incineration. And I think as part of our public outreach  
16 efforts, we need to convey that to the public to overcome  
17 their concern with traditional waste to energy.

18 --o0o--

19 MR. SKYE: We saw the benefits of these -- first  
20 of all, an independent verification of the technology to  
21 see how it operates and whether it's as successful as  
22 promoted by the technology suppliers. We were able to  
23 assess the regulatory policy differences between  
24 California and the locations where the facilities operated  
25 to see what we could learn and what might affect our

1 implementation.

2           We were looking at the feedstock and how that  
3 might affect our implementation as well, and meeting with  
4 the regulatory agencies and community members in other  
5 stakeholders around the facility.

6                               --o0o--

7           MR. SKYE: In terms of our progress and next  
8 steps, we're wrapping up our Phase 2 process, which  
9 completed the evaluation of our short list of conversion  
10 technology suppliers and material recovery facilities.  
11 We'll have our Phase 2 report completed probably within a  
12 month or two and publicly released. We're also  
13 concurrently developing a public outreach contract, which  
14 will hopefully promote some of this information that we've  
15 learned through our Phase 2 process and answer the  
16 concerns that residents and other stakeholders have about  
17 these technologies.

18                               --o0o--

19           MR. SKYE: Once we complete our final report  
20 we'll begin our negotiations phase where we hope to  
21 develop a competition between the MRFs and technology  
22 suppliers to develop the best proposals. And  
23 optimistically our ground-breaking could be as soon as  
24 2009, assuming all the other issues are addressed.

25

1                               --o0o--

2               MR. SKYE: We see the benefit of the  
3 demonstration, first of all, in developing concrete data  
4 which will help us to move forward in our regulatory  
5 issues; provide a rigorous analysis of the technical,  
6 economic, and environmental feasibility; provide a  
7 permitting pathway, which we're still unsure of as of  
8 today in how to develop these projects going forward; and  
9 provide an emphasis for the public -- private sector to  
10 move forward on additional projects which really need to  
11 manage our waste in the future.

12                             --o0o--

13              MR. SKYE: I wanted to also share some of the  
14 other issues that were raised, first of all, in terms of  
15 diversion credit. The County of Los Angeles has also  
16 recently obtained our -- met our 50 percent diversion  
17 rate. But I think there's two issues in play. One is  
18 that we all see the need to continue to increase our  
19 diversion rate. And diverse credit plays into that, where  
20 if we're not providing diversion credit, then every ton we  
21 send to a conversion technology will be counted against  
22 us.

23              I think -- the other issue is that the financial  
24 incentives are going to drive the future development for  
25 conversion technologies. As we're seeing right now, the

1 cost for recycling is actually over a hundred dollars per  
2 ton. Cost for traditional waste-to-energy, which receives  
3 the 10 percent diversion credit, is also higher than  
4 traditional landfill disposal. And jurisdictions are  
5 willing to pay that extra fee in order to get that  
6 diversion credit. We're going to see that continue to  
7 happen as we're developing conversion technologies. But I  
8 would gladly set aside the diversion credit in order to  
9 overcome the more significant statutory hurdles that are  
10 currently written into law.

11 In terms of NIMBYism, or the term I use is  
12 BANANA, build absolutely nothing anywhere near anyone,  
13 it's a very big challenge. The only way to overcome it is  
14 to meet their -- stakeholders to get them involved in the  
15 process to make them feel that they are heard, that their  
16 concerns are addressed. And we're working through that.  
17 We've started early with our outreach efforts in order to  
18 bring the stakeholders in before the proposals  
19 are -- excuse me -- before the proposals are developed so  
20 that they do feel like they're part of the process.

21 We talked about targeting the higher quality  
22 feedstocks and making sure that we have the best and  
23 highest use. I think that's part of our implicit  
24 co-location with materials recovery facilities. I would  
25 say the same for the City of Los Angeles, which is looking

1 at black waste which is going to disposal.

2 But I think fundamentally this is a  
3 misperception. And I would say that as a resident of Long  
4 Beach, we have the largest waste-to-energy facility in the  
5 state. And we also have among the highest diversion rates  
6 in the state, 62 percent. And the city is also, as we  
7 speak, increasing and expanding their recycling programs.  
8 They're continuing to do more. And we see that driven by  
9 the community as well as jurisdictions, which want to see  
10 higher diversion rates and more recycling.

11 So I think the two are definitely not mutually  
12 exclusive. We're going to continue to pull more materials  
13 out and then focus more on source reduction as we develop  
14 these conversion technologies to handle what's left over,  
15 which there'll always be something left over.

16 I'd appreciate your -- any questions that you  
17 have.

18 CHAIRPERSON BROWN: Thank you, Coby.

19 Does anybody have any questions?

20 Thank you very much. Appreciate your comments.

21 MR. BERTON: Okay. The Last two speakers will be  
22 talking about -- for this section will be talking about  
23 some landfill gas and -- to energy, the CNG/LNG projects  
24 and a project at a landfill.

25 Chuck White never needs an introduction, so I'll

1 just say here's Chuck White.

2 MR. WHITE: Thank you very much.

3 Madam Chair, members of the Board. And also  
4 welcome to Board Member Peace. We look forward to our  
5 renewed discussions with you on all things recyclable and  
6 renewable.

7 Welcome.

8 Before I start an update on Altamont's  
9 landfill-gas-to-LNG project, I would like to provide some  
10 context about the importance of the work that is being  
11 done to use landfill gas to produce clean, renewable  
12 transportation fuels.

13 Landfills in California have been required to  
14 capture landfill gas for over 20 years, far ahead of the  
15 rest of the world and far ahead of the rest of the nation.  
16 It is estimated that 95 percent of the waste in place in  
17 California has an active gas collection system that  
18 results in the destruction of methane and other  
19 contaminants.

20 Recognizing the energy potential of this  
21 collected gas, Waste Management was one of the first  
22 landfill operators to take landfill gas we were collecting  
23 and just burning or flaring and instead convert to useful  
24 energy by using reciprocating engines and turbines to  
25 generate electricity.

1           Today we have over a hundred  
2 landfill-gas-to-energy projects. Total energy production  
3 will be 700 megawatts nationwide. And also Waste  
4 Management has 17 waste-to-energy plants nationwide  
5 generating an additional 680 -- 690 megawatts, with a  
6 total energy production of all of Waste Management's  
7 facilities of over 1400 megawatts.

8           Yet even today less than 50 percent of the  
9 landfill gas we can collect and destroy in California and  
10 nationwide is used to produce useful energy.

11           Waste Management is taking aggressive and  
12 definitive steps to address this under-utilization of  
13 landfill gas we collect. You may have seen the  
14 announcement Waste Management made on June 27th about our  
15 new alternative energy initiative. And if you haven't, I  
16 just happened to bring another 50 copies with me here  
17 looking for distribution. So I will make sure those get  
18 round to you.

19           We announced that we would be developing 60 new  
20 landfill-gas-to-energy projects throughout North America  
21 over the next five years. These new projects will  
22 generate more than 230 megawatts of renewable energy. Ten  
23 projects will come on line this year. And we will start  
24 working on ten more projects before the year is out.

25           What is worth noting however is that none of

1 these projects are going to be located in California. Our  
2 options here are severely constrained primarily by the  
3 cost of providing criteria pollutant offset requirements  
4 and a difficulty in meeting local air district BACT  
5 requirements, B-A-C-T, best achievable control technology,  
6 and the potential for even more restricted standards,  
7 particularly in the South Coast Air Quality Management  
8 District. Their rule 1110.2 propose that  
9 landfill-gas-to-energy projects essentially meet standards  
10 for natural gas powerplants by the year 2012. Not only  
11 would this rule prevent new landfill-gas-to-energy  
12 projects from coming on line, but may actually require  
13 existing projects to be shut down.

14 COMMITTEE MEMBER CHESBRO: Chuck, Can I -- I have  
15 a question.

16 MR. WHITE: Yes, by all means.

17 COMMITTEE MEMBER CHESBRO: So you're saying, I  
18 think I heard, that it's harder for the energy production  
19 to meet the air quality requirements than the flaring?

20 MR. WHITE: Well, flaring's required as a  
21 pollution control technology in and of itself to destroy  
22 naturally occurring methane -- organic compounds. We'd  
23 have to -- so what we want to do is convert this to -- to  
24 burn it in a flare. But if you convert it to energy using  
25 an engine, it actually produces a little more NOx and a

1 little more CO than you would in the flare.

2 COMMITTEE MEMBER CHESBRO: In the flaring --  
3 flaring actually.

4 Okay. Thank you.

5 MR. WHITE: Although it -- well, yeah, if we talk  
6 about this much further -- and I'd love to have a more  
7 extended discussion about this -- but I mean the overall  
8 reduction, we could talk about the offsetting of fossil  
9 fuel production, would be a net wash basically. So I mean  
10 there really -- note a slight increase in the production,  
11 you're offsetting production from fossil fuels.

12 In addition, many of us in the solid waste  
13 industry have been hoping that the emerging greenhouse gas  
14 reduction market system might provides an additional  
15 source of funding incentives for landfill gas projects by  
16 the sale of greenhouse gas reduction credits associated  
17 with displacing fossil fuel energy with new biogenic  
18 source of energy from landfill gas.

19 Yet further clouds are gathering on the horizon  
20 for landfill gas to energy. An additional new development  
21 in that the greenhouse gas reduction credits may not be  
22 available for landfill gas to energy projects. As stated  
23 in the livestock-waste-to-greenhouse-gas protocols  
24 recently adopted by the California Climate Action  
25 Registry, producing power for the electricity grid and

1 thus displacing fossil fuel power plant greenhouse gas  
2 emissions is a complementary and separate greenhouse gas  
3 project activity to destroy methane gas from waste  
4 treatment of storage, and is not included within this  
5 protocol's accounting framework.

6           If this approach holds true for solid waste  
7 landfill greenhouse gas protocols yet to be developed,  
8 greenhouse reductions for a landfill-gas-to-energy project  
9 will be exactly the same for a landfill gas flare. That  
10 is, it won't make any difference whether you collect the  
11 gas in flare or collect the gas and convert it to energy.  
12 You'll get the same amount of greenhouse gas credits  
13 either way.

14           The apparent rationale of the registry is that  
15 other credits, namely, renewable portfolio standard  
16 credits are already available for the electricity  
17 production.

18           Yet the marginal financial value of RPS credits  
19 alone from utilities is not sufficient to cover the cost  
20 of converting landfill gas to electricity in California  
21 and to meet California's tough criteria pollutant emission  
22 standards.

23           So here we are. Less than half -- far less than  
24 half the landfill gas collected today in California is  
25 converted into electricity. And that number could

1 actually go down in the near future.

2 But wait. We absolutely need, as we've been  
3 hearing today, to maximize the green renewable energy  
4 produced from recovered landfill gas and from other waste  
5 sources. And one of our options is to produce clean  
6 transportation fuels such as LNG and synthetic diesel.  
7 One of the significant advantages of producing biofuels  
8 from landfill gas is that the criteria pollutant emissions  
9 associated with such a facility are greatly reduced as  
10 compared to conversion of landfill gas to electrical power  
11 at the landfill. Yet the cost of a landfill gas biofuel  
12 facility is also very high, and it has never been done  
13 before on a commercial scale.

14 Today our focus in California, that is, Waste  
15 management's, is on a project at Altamont landfill to  
16 convert landfill gas into 13,000 gallons of liquefied  
17 natural gas per day.

18 The economics of scaling up this technology to a  
19 commercial level are challenging, but have been helped  
20 enormously by over 1.6 million in grant funds awarded by  
21 the Board and by -- this Board and by the Air Resources  
22 Board and by the South Coast AQMD.

23 Today, LNG is the cleanest fuel available for  
24 heavy-duty trucks. And Cummins-Westport, one of our  
25 suppliers, has already developed a heavy-duty LNG engine

1 that meets 2010 emission standards. And LNG produced from  
2 a waste-derived source such as landfill gas offers a very  
3 substantial benefit in reducing greenhouse gas emissions.  
4 And we hope we'll be able to get credits for this as this  
5 emerging trading program and perhaps through the  
6 renewable -- the low carbon fuel standard.

7 More natural gas trucks fueled by waste-derived  
8 LNG just from the Altamont landfill alone can offset 2.8  
9 million gallons of diesel fuel each year and reduce  
10 greenhouse gas, NOx and PM emissions.

11 And there is a lot more landfill gas available  
12 for clean fuel production. If all recoverable biomethane  
13 was tapped -- and that's not only from landfills but from  
14 biological digesters at sewage treatment plants and  
15 elsewhere -- California could displace about 900 million  
16 gallons petroleum-based diesel fuel each year. This is  
17 nearly one-third of the total diesel consumption in all of  
18 California.

19 Landfill gas alone could displace about 150  
20 million gallons of diesel per year or about 5 percent of  
21 the total consumption.

22 So where do we stand today with the Altamont  
23 project? First, we have two partners: Linde BOC and the  
24 Gas Technology Institute. Linde BOC is one of the world's  
25 largest producers of industrial gases. And the Gas

1 Technology Institute developed the proprietary landfill  
2 gas purification production technology that will be used  
3 at our Altamont landfill. This process will involve  
4 cryogenic separation of methane from carbon dioxide and  
5 other contaminants.

6 The final details of our business arrangements  
7 are being completed as I speak.

8 Although the project has received 1.6 million in  
9 grant support from the Waste Board, Air Board, and the  
10 South Coast, the total cost will run about 12 to \$13  
11 million. The cost of this type of project are high in  
12 large part due to the contingencies built in as part of  
13 one of its -- as one of the first of its kind facilities.

14 We have land-use approval; support from our  
15 closest city, City of Livermore; and they have already  
16 begun the construction site survey.

17 We believe construction will begin in  
18 September-October timeframe of this year and require about  
19 9 to 12 months to complete. It is possible that we'll be  
20 cutting the ribbon and producing LNG about one year from  
21 today. And I hope to be back to you to report that that  
22 is the successful outcome a year from now.

23 Waste Management is really excited about the wide  
24 range of renewable energy projects that we're involved in,  
25 including landfill gas to energy, landfill gas to fuel

1 that I just described, partnering with Bluefire at a  
2 couple of our landfills in southern California to produce  
3 cellulosic ethanol, and a renewed interest in producing  
4 energy from waste that Wheelabrator, our subsidiary, has  
5 years and years of experience in.

6 When I first joined Waste Management 16 years  
7 ago, I thought of us as a comprehensive waste management  
8 and recycling company. But now I'm beginning to think  
9 more and more of a comprehensive waste management,  
10 recycling, and renewable energy company.

11 Thank you.

12 CHAIRPERSON BROWN: Thanks, Chuck.

13 Any questions?

14 MR. BERTON: Any Questions?

15 Okay. Our next speaker is Ramin Yazdani with  
16 Yolo County.

17 (Thereupon an overhead presentation was  
18 Presented as follows.)

19 MR. YAZDANI: Madam Chair and Board members.

20 Good morning. I'll try to be brief, because we're getting  
21 closer to the lunch hour.

22 I'm here to speak on a project that was funded by  
23 you. Thank you.

24 And we received our contract in May. We've  
25 already started construction; done the preliminary design

1 before we even got the funding. So all we're going to do  
2 is kind of go through what we've accomplished so far, just  
3 to review -- just to remind you what the goals of the  
4 projects were and some of the benefits and then talk about  
5 the status and answer any questions that you may have.

6 --o0o--

7 MR. YAZDANI: The main goal was basically to  
8 design and construct a demonstration pilot scale anaerobic  
9 digester, which it's not only an anaerobic digester but it  
10 also can produce compost at the end, and take feedstock  
11 that is already going to the landfill such as green waste,  
12 grass clippings, and other types of organics that may  
13 be -- food waste also that could go directly to this  
14 project.

15 However, the material has to be sort of clean,  
16 not highly contaminated, and produce energy as opposed to  
17 just aerobically composting it. Go through the anaerobic  
18 phase for about a year and then go through aerobic phase  
19 following that.

20 And we're using basically the technology that we  
21 have been experimenting with for the past ten years at  
22 Yolo, bioreactor technology, and it's kind of fitted into  
23 an only-organic type of technology so we could generate  
24 more power and produce clean compost at the end.

25 And so collect a lot of data as far as what the

1 emissions are and what the benefits are -- energy benefits  
2 are and to be able to develop a technology that's cost  
3 effective. A lot of the European technologies that you  
4 have seen today are very expensive. There was not a lot  
5 of discussion about cost, as you could imagine. But there  
6 were some previous speakers spoke about the cost. But  
7 they are very expensive and it doesn't really fit to what  
8 we're doing here, unless we change the way we do things.

9           So what we wanted to do is -- can we do this?  
10 Sort of like a landfill but not quite like a landfill, and  
11 be able to excavate it out and use it and basically have a  
12 digester that can be used both as a temporary storage and  
13 energy generation and compost generation facility.

14                               --o0o--

15           MR. YAZDANI: So some of the benefits is  
16 basically -- some of these greenhouse gases that we talk  
17 about, methane, nitrous oxide, carbon monoxide -- these  
18 three gases are actually are produced in aerobic  
19 composting. And there's an amount of literature that has  
20 documented. In Germany there's been a lot of studies  
21 done. Not as many studies in California. But these are  
22 definitely some emissions that are coming from our  
23 composting operation. We have done aerobic and anaerobic  
24 operation of landfill ourselves, and so we have our own  
25 data as well that we look at.

1           And energy -- renewable energy, we can take that  
2   organic waste and produce power as opposed to make CO<sub>2</sub>.  
3   So we make 50 percent methane, 50 percent CO<sub>2</sub>. We want to  
4   make most of that gas as methane. As long as we capture  
5   all of that and make electricity from it, then we're not  
6   causing additional greenhouse gas to be released to the  
7   atmosphere. So one aspect of this project is to try to  
8   construct it so that you can capture everything and do a  
9   good mass balance.

10           The water quality improvements are such that you  
11   don't have those runoff issues from the composting  
12   operation, odor issues. And then -- I skipped over the  
13   greenhouse gas credits. Those also could be evaluated to  
14   see if you can demonstrate that you can reduce greenhouse  
15   gases, because you are capturing the CO<sub>2</sub> and converting it  
16   and offsetting the fossil fuel usage. And then the end  
17   product will be a compost material that can be utilized in  
18   agriculture use or it could be used for sale for other  
19   places.

20                               --o0o--

21           MR. YAZDANI: So the project is located at the  
22   Yolo County central landfill, which is about 15, 20  
23   minutes from here, close to the City of Davis. We've gone  
24   through the permit phase very quickly. We had a lot of  
25   help from Waste Board and the LEA, which is the local

1 health department.

2 --o0o--

3 MR. YAZDANI: And basic design is very simple.

4 Basically you have a gas collection/air injection. This

5 is -- what I'm showing is the anaerobic phase of the

6 project, which you have a blower pulling gas out and

7 adding liquids and recirculating and then producing

8 electricity. And everything is enclosed.

9 --o0o--

10 MR. YAZDANI: And so here's a -- the one benefit

11 of this is that we located this on top of an existing

12 landfill. And so there's -- the permitting became much

13 different than if you were going to build this somewhere

14 outside of a lined area.

15 --o0o--

16 MR. YAZDANI: And so on top of this cell we

17 basically build a cell with a levee around it and compact

18 it, grade it, and place the liner -- prefabricated liner

19 placed over the area. It's a mini -- I would call it a

20 mini-landfill, but it's not a landfill. So that's why

21 it's called landfill-based project.

22 --o0o--

23 MR. YAZDANI: Once that's placed and then we are

24 ready to put a protective layer over that and place

25 sensors and gas piping. And directly over that -- we

1 wanted to use materials that already is at the landfill.  
2 So here's an example of, you know, wood that was grind up  
3 from the material that came to the site. So this is the  
4 layer that's at the base layer, provides a permeable  
5 layer. And it can also be mixed with the compost and it  
6 doesn't contaminate it.

7 We were contemplating using tires. We have used  
8 tires in the past. But then you would have to do more  
9 sorting, and so we decided to go with wood chip.

10 --o0o--

11 MR. YAZDANI: Then on top of that goes our  
12 compost. And we are also putting horse manure. Locally  
13 there is a need to get rid of the horse manure. And that  
14 provides a good source of micro-organisms for the  
15 anaerobic phase of the project.

16 And so we are filling as we speak. We are not  
17 done. It will go probably till another couple of months.

18 --o0o--

19 MR. YAZDANI: And we're also doing some  
20 laboratory tests in terms of looking at different  
21 treatments. As we're building this, we're also learning  
22 some of the challenges that are coming along.

23 --o0o--

24 MR. YAZDANI: So right now we're on schedule.  
25 And the filling will be done August, September. That's

1 kind of an estimate right now. It depends on the  
2 material, how quickly we can get material. And, you know,  
3 the grass and other things are slowing down. So we're  
4 trying to go as material comes in.

5 And this is sort of like a batch system. So you  
6 build one cell and then you build another one. And then  
7 you let one cell go through its process and then you can  
8 go back and aerate one and excavate that one and continue  
9 your process.

10 So we are really excited about this. I think  
11 this is going to be a one technology that would have a  
12 place of its own for a specific site that can actually  
13 accommodate land -- you know, a large area that could be  
14 doing this batch kind of reaction.

15 So if you have any questions, I'll be happy to  
16 answer them.

17 CHAIRPERSON BROWN: Thank you. Very interesting.

18 Anybody, any questions?

19 COMMITTEE MEMBER CHESBRO: Is there a  
20 significant -- or maybe this is a question you need to  
21 answer it through this project. But is there -- do you  
22 know a significant difference in the characteristics of  
23 the compost that's produced if it's produced in an  
24 anaerobic environment versus an aerobic compost?

25 MR. YAZDANI: Well, before -- it depends on the

1 feedstock of course in terms of like food waste or green  
2 waste. This particular cell is going to be mainly green  
3 waste. So it's grass and leaves and others.

4           We have -- I have purchased for another project  
5 that we did, a biocover project, we purchased some green  
6 waste compost, and the quality is not much different. It  
7 all depends on what kind of nutrients you have available  
8 in that.

9           We've done some -- on this particular material we  
10 took samples and did a basic nutrient analysis and also  
11 carbon-nitrogen ratio for that. And as long as you have  
12 adequate of different types of material in there, there  
13 shouldn't be any major difference.

14           So to answer your question, depends on the  
15 feedstock. But while we have looked at -- if you only  
16 have, let's say, grass, for example, you're going to have  
17 a different end product. You're going to have some  
18 challenges in terms of digesting that. As opposed to if  
19 you have food waste mixed with green waste, then you have  
20 nutrients -- there are certain nutrients you need. And  
21 that's one of the reasons we add in manure, because you  
22 can have a lot of nitrogen but not enough nutrients, and  
23 then your reactions don't work well.

24           CHAIRPERSON BROWN: Thank you.

25           Soup. You've got to have all the ingredients to

1 make it work.

2 MR. YAZDANI: I'm sorry?

3 CHAIRPERSON BROWN: Soup. You've got to have all  
4 the ingredients to make it work.

5 MR. YAZDANI: Yes, we have it.

6 CHAIRPERSON BROWN: Sorry. It's almost lunch  
7 time.

8 (Laughter.)

9 CHAIRPERSON BROWN: Howard and Fernando --

10 MR. BERTON: Well, I'd like to --

11 CHAIRPERSON BROWN: -- I'll turn it back to you.  
12 Thank you all very much. I appreciate it.

13 MR. BERTON: Yeah, we're running a little behind,  
14 but --

15 CHAIRPERSON BROWN: Well, we did take half hour  
16 of your time this morning. So that's why I recognize that  
17 we will run a little over what we originally anticipated,  
18 which was noon, as our end time.

19 But we'll -- I think we're moving into Part 3?

20 MR. BERTON: Yes, Part 3. As you know, the Board  
21 funded a biofuels -- solid-waste-to-biofuels forum that  
22 was held in late March of 2007. And the California  
23 Biomass Collaborative put that together for us.

24 And Rob Williams and Martha Gildart are here to  
25 talk about the results, what some of the stakeholder

1 recommendations were, et cetera.

2 PROGRAM DIRECTOR LEVENSON: While they're coming  
3 up I'll just add, that after this we have one more  
4 section, which is the UC Davis report on hydrogen --  
5 landfill gas to hydrogen, and a quick staff wrap-up and  
6 then we're done. So we're pretty close.

7 CHAIRPERSON BROWN: Let me just ask the court  
8 reporter. Do you need a break, or can you go about a half  
9 hour? Okay.

10 (Thereupon an overhead presentation was  
11 Presented as follows.)

12 DR. WILLIAMS: Well, good morning. I'm Rob  
13 Williams from the Biomass Collaborative at University of  
14 California at Davis. Thank you for this opportunity to  
15 talk to you today.

16 So I've been asked to briefly go over the  
17 results -- or review some of the discussion results from  
18 the bio -- MSW-2 biofuels forum held back in March.

19 --o0o--

20 DR. WILLIAMS: Okay. Got the control.

21 Quick background. The Biomass Collaborative held  
22 its fourth annual forum March 27 and 28 here in this  
23 building. And the Waste Board sponsored one day of that  
24 forum, which was the 28th of March. The topic of that day  
25 was "Producing Biofuels from Waste Research

1 Commercialization Strategies."

2 --o0o--

3 DR. WILLIAMS: The goal of the forum was to  
4 assess the technical and economic feasibility of producing  
5 biofuels from solid waste, with an emphasis on identifying  
6 key concerns, barriers, research testing, and pilot  
7 project opportunities, as well as to provide information  
8 for the Board in order to use this information to support  
9 Executive Order S-0606, which establishes biofuels and  
10 bio-energy production targets for California.

11 A background discussion paper was produced and  
12 made available prior to the forum. And that paper, the  
13 forum agenda, presentations from the forum, and  
14 transcripts are available on the Biomass Collaborative  
15 website.

16 --o0o--

17 DR. WILLIAMS: Structure of the forum. It  
18 started off with a keynote kickoff speech by Margo Brown.  
19 She was followed by two speaker panels in the morning.

20 The first panel addressed policies affecting use  
21 of biomass in the municipal waste stream. And that was  
22 composed of three speakers.

23 The second panel addressed biofuel production  
24 from municipal waste. And there were -- we had four  
25 speakers available for that panel.

1           And then in the afternoon the forum split into  
2 facilitated break-out groups. The members -- attendees  
3 self-selected which group they wanted to attend; the  
4 groups organized by biofuel type. So we had alcohol  
5 fuels; biogasoline or renewable gasoline and diesel for  
6 the second group; and then biogas fuels for the third  
7 group.

8           And then each break-out group was asked to go  
9 through two consecutive sessions, the first one to address  
10 pathways, barriers, solutions to commercialization; and  
11 then the next session was to address research needs for  
12 these different types of fuels.

13           And then at the end of the break-out session we  
14 reassembled in the main auditorium, and reports -- we  
15 heard reports from each of the break-out groups on what  
16 issues they were able to come up with.

17                               --oOo--

18           DR. WILLIAMS: So I'll just briefly go over then  
19 the summary and results of those break-out discussions as  
20 they were reported back from each of the groups.

21           So overall the concerns and comments were quite  
22 diverse and varied. But there were -- there was a set of  
23 key common issues and concerns that came up by these  
24 break-out groups. And the following slides are -- I'll  
25 discuss some of these. And they're organized more or less

1 along policy, regulations, and permitting; research,  
2 education, and outreach; and then financing.

3 --o0o--

4 DR. WILLIAMS: And then a lot of -- some of these  
5 issues of course are going to be a reiteration of what  
6 you've heard already this morning, because these are  
7 common issues that keep returning in lots of these  
8 discussions. And also many of the participants in the  
9 forum were people that were here talking about their  
10 projects this morning.

11 So the issue of diversion and credit is one of  
12 the main issues brought up by members at the forum. The  
13 idea that diversion credit amount depends -- that depends  
14 on a type of conversion technology is seen as a feedstock  
15 limitation. And this idea of variable diversion credit is  
16 rather arbitrary without comprehensive life cycle  
17 accounting for the full waste stream in the California  
18 waste -- integrated waste context.

19 And then the idea that diversion credit for green  
20 waste buried in a landfill as ADC can also skew feedstock  
21 markets. And there's also the general feeling that this  
22 practice violates AB 939 diversion goals or at least the  
23 spirit of AB 939.

24 --o0o--

25 DR. WILLIAMS: The definitions -- there are lots

118

1 of issues amongst the participants in the forum along  
2 statutory definitions of conversion technologies. The  
3 feeling is that these are currently incorrect and/or  
4 outdated, including the concept of transformation.

5           And then there's a common feeling that there's a  
6 need for life cycle thinking and decision making. And  
7 this applies to the need for a systems approach to the  
8 waste management policy and the decision makers. And this  
9 is also referred to sometimes as a cross-media benefit  
10 cost accounting.

11 --o0o--

12 DR. WILLIAMS: In the regulations and permitting,  
13 group of concerns that were common include feedstock for  
14 conversion technologies that are -- should be considered  
15 as a raw material for an industrial process, and maybe  
16 then consider that it should no longer be part of the  
17 CIWMB regulated -- or in their purview. This issue's also  
18 related to diversion credit and technology definitions  
19 that were discussed above.

20           There's a common feeling that there are --  
21 improvement in permitting processes would be helpful. So  
22 the idea of a one-stop permitting shop or a permitting  
23 ombudsman was brought up quite often by members of the  
24 different groups. And there was -- many people spoke up  
25 for the need for a permit waiver for research and

1 demonstration facilities at particular scale, which could  
2 be, you know, a temporary waiver until there's information  
3 gathered and then you could go into a fuller permitting  
4 process.

5           There's a general feeling that there are  
6 contradictory goals and sometimes inconsistencies amongst  
7 the different regulatory agencies. These would be the  
8 air, water, and solid waste media. And that points to a  
9 need for a better cross-media approach to regulation.

10                               --o0o--

11           DR. WILLIAMS: And the research, education, and  
12 outreach category of common issues and concerns is -- many  
13 people felt that there's still need for technology  
14 demonstration at reasonable scale, not laboratory or small  
15 pilot, and these demonstrations need to be conducted or  
16 viewed by competent and objective evaluators. And this  
17 would help then fill in a lack of data and information  
18 that the Board and other regulatory agencies could use for  
19 permitting.

20           There's a feeling amongst many of the  
21 participants that the regulators themselves need to better  
22 understand the technology status and its capabilities or  
23 their capabilities, as well as project proponents need to  
24 better understand the permitting process. And what's very  
25 key was the project proponents should -- they need to

120

1 understand the importance of the reliable and independent  
2 technology performance information that they are asked to  
3 provide for the regulators.

4                   And then a general feeling of the public and  
5 stakeholders' need to better understand the full range of  
6 waste management options and their benefits and impacts  
7 and trade-offs of the many potential choices and  
8 strategies.

9 --o0o--

10 DR. WILLIAMS: And then in the financing area,  
11 the main -- or the single common concern that came up from  
12 all three groups had to do with risk mitigation for  
13 emerging technologies, financial risk mitigation.

14 --o0o--

15 DR. WILLIAMS: So --

16 COMMITTEE MEMBER CHESBRO: The Valley of Death  
17 work?

18 DR. WILLIAMS: Yeah, the Valley of Death, that  
19 comes up often and it's a cliché now. It's the area of  
20 development of a process or a project that comes after the  
21 research has been done and the funding has been expended  
22 for research and maybe a small pilot demonstration, but  
23 before any commercial facilities exist that the banks can  
24 use to go look at to decide if the bank wants to fund a  
25 facility. So it's this area between many commercial

1 facilities out there that people know about and then banks  
2 are willing to lend money on based on performance of the  
3 existing facilities versus the area that a first facility  
4 needs to get through.

5 --o0o--

6 DR. WILLIAMS: So these common concerns are not  
7 new. You've heard them already from several speakers this  
8 morning, and they've come up in many board meetings,  
9 workshops, conferences, studies, reports, et cetera. I've  
10 listed just three right there where many of these same  
11 concerns, and some others, are addressed and some  
12 recommendations are made.

13 --o0o--

14 DR. WILLIAMS: The conclusions from the forum  
15 indicate that again there's a strong need for a  
16 comprehensive life cycle assessment that compares the full  
17 range of waste management options and strategies in the  
18 state. And this includes the fate of the recycle stream  
19 that goes outside of California, including overseas, the  
20 social impacts and emissions impacts of these recycle  
21 processes that may be outside of California.

22 And then these results should be used more --  
23 needed more to inform the policy and new policy.

24 There's a need to establish clear performance  
25 standards, while avoiding inconsistent regulatory and

1 technology definitions and technology prescriptions. You  
2 know, we need to set performance standards and then let  
3 innovation meet or exceed these standards.

4 And then there's a need to clarify, consolidate  
5 permitting processes and responsibilities within the Board  
6 and across the other agencies

7 --o0o--

8 DR. WILLIAMS: Again, emphasizing the need to  
9 adopt life cycle thinking among the Board and other policy  
10 makers, there's a recommendation to develop solid waste  
11 life cycle analysis capability at the Board and/or within  
12 the state. There's a need to establish sustained research  
13 program that can bring technologies and strategies from  
14 laboratory through pilot and full scale demonstration,  
15 with clear objectives on data quality and data type that  
16 the Board can use for proper assessment. This also  
17 includes a program -- a research program that does  
18 appropriate analysis of waste management systems and  
19 strategies.

20 --o0o--

21 DR. WILLIAMS: In the area of education and  
22 outreach, the conclusions can be -- come out that the  
23 public and interest groups and regulators, we all need  
24 more education and information with respect to biomass and  
25 MSW conversion technologies, bio-energy and biofuels, so

1 that statutes and regulation do not precede a technology  
2 understanding or impede innovation.

3 And that's all I have, and I'm ready to take --  
4 or pleased to take questions if you have any.

5 CHAIRPERSON BROWN: I think you hit the nail on  
6 the head.

7 Any questions from anybody?

8 Okay. Thank you, Rob, very much.

9 DR. WILLIAMS: Sure.

10 CHAIRPERSON BROWN: I appreciate it.

11 PROGRAM DIRECTOR LEVENSON: Thanks, Rob.

12 And our last speaker before we do a quick staff  
13 wrap-up is Kurt Kornbluth from the University of  
14 California at Davis.

15 I think -- while Kurt's coming up -- you know, a  
16 couple years ago as part of the research that we've tried  
17 to do on biofuels and bio-energy there were a lot of  
18 questions coming up about what was the role of solid waste  
19 and landfill gas in particular in its ability to produce a  
20 hydrogen fuel. So we contracted with University of  
21 California at Davis to conduct some research on that  
22 landfill-gas-to-hydrogen question so we'd have a better  
23 base of information for the Board making future decisions.

24 So Kurt was the principal investigator for that,  
25 along with a lot of his colleagues at the University of --

1 at UCD. As he'll explain, we had a couple of workshops.  
2 And we have received the final contract report from Kurt  
3 and UCD. We'll be posting that on the website. And we're  
4 not asking for approval or acceptance really, but we  
5 wanted to provide that to you so you know that this is yet  
6 another valuable information source that we can use in our  
7 policy discussions about biofuels, bio-energy, and  
8 associated issues.

9           So with that, I'll ask Kurt to give you a summary  
10 of the contract and the project.

11           (Thereupon an overhead presentation was  
12           Presented as follows.)

13           MR. KORNBLUTH: Thanks, Howard.

14           I did want to thank Howard and the staff and  
15 Scott Walker for helping us the whole way in preparing  
16 this report. And thanks to the Board for listening to the  
17 results today.

18           I'm a PhD candidate in mechanical engineering at  
19 UC Davis, and this is a large part of my work.

20           This report was prepared with cooperation between  
21 the Integrated Waste Management Board, Institute for  
22 Transportation Studies at Davis, and the Biomass  
23 Collaborative. And Bryan Jenkins and Rob Williams also  
24 helped.

25   --o0o--

1           MR. KORNBLUTH: So what did we do? And  
2 fortunately some people have helped me set the stage here,  
3 so a lot of the stuff I'm just going to leave out. I try  
4 to make a pretty short presentation, and a lot of the  
5 information's already been covered here.

6           But specifically on this project we held a first  
7 workshop at the very beginning of the project just to  
8 define the research focus. And we got together  
9 stakeholders from industry and waste management and  
10 government, et cetera, to talk about what they really --  
11 what were the issues. And we were just talking about  
12 hydrogen production from landfill gas, and that's just  
13 from landfill gas. So that's waste already in place  
14 that's producing gas. So we didn't really look at, were  
15 there other ways to divert waste and, you know, other ways  
16 like what Ramin is doing, which makes -- would make life  
17 easier if you wanted to produce hydrogen. And I'll talk a  
18 little bit about that and why that does make it easier.

19           And then we prepared a report, spent about, I  
20 don't know, a little over half a year doing it, and then  
21 presented the draft to a second workshop and then we  
22 finalized the report. And that's what's going to be  
23 posted, the final report. And there's also a much longer  
24 presentation which I will try to post also. So if you  
25 guys want to look at that, that will be available.

1 --o0o--

2 MR. KORNBLUTH: What was the focus in the end?

3 Well, one thing people were interested in is just looking  
4 at the overall LFG potential as far as landfill gas in  
5 California and then how much hydrogen could be made from  
6 that. And so we did that. And Rob Williams actually is  
7 the main person who did that.

8                   And then we looked at two main areas. And one  
9   was producing vehicle-grade hydrogen from landfill gas.  
10 And so with the Governor's talk about the hydrogen highway  
11 and all this talk about fuel cell vehicles, we wanted to  
12 do that. Also, at the Institute for Transportation  
13 Studies, where I'm housed, we do a lot of fuel cell  
14 vehicle research. And so we actually have a lot of  
15 resources into the planning of the hydrogen highway and  
16 also vehicles and the technology that's on the fora. So  
17 we looked at methods in economics for that.

18           And then another interesting technology that  
19 people we're interest in, and actually Chuck White sort of  
20 set the stage perfectly for me, which was reducing NOx  
21 emissions when you're burning landfill gas. And that was  
22 using -- but specifically using hydrogen enrichment. So  
23 injecting some hydrogen in and making for a leaner mixture  
24 and then just lowering NOx. And that's using in  
25 reciprocating engines, because we know that microturbines

1 we can lower emissions, but it's not as an accepted  
2 widespread technology. And we know that reciprocating  
3 engines are here for a long time, so we want to look at  
4 reduction strategies for those guys.

5 --o0o--

6 MR. KORNBLUTH: And just -- so to introduce first  
7 section, LFG potential, here's a -- there's a lot of  
8 landfills, but this is a few of them.

9 --o0o--

10 MR. KORNBLUTH: And then from Rob's model we just  
11 looked at, what were the -- how much landfill gas do we  
12 have now and what's sort of the projections? And there  
13 was a few different scenarios. But this is I think the  
14 base-line one. So looking at today, 2005, and up to 2025.

15 --o0o--

16 MR. KORNBLUTH: And then the more -- the thing  
17 that we were a little more interested in was how much  
18 hydrogen could we produce in, say, gasoline equivalent?  
19 And so we looked at that.

20 And I think this slide says 280, but I think the  
21 number is more like 315 million gallons equivalent and  
22 could be produced today at 2005. And that's all assuming  
23 that we would use around the -- some of the gas to produce  
24 300 megawatts of electricity, which is a little more than  
25 we're producing now. And so I think this was a question

1 that came out earlier.

2 But is that clear now?

3 So -- and that's about 2 percent of California's  
4 automotive use right now. So if you were to take and  
5 produce about the same amount of electricity and then  
6 recover -- or utilize more of the gas for hydrogen  
7 production, you might be able to get around 2 percent of  
8 California's vehicles. And that's also assuming hydrogen  
9 running through fuel cell and that your fuel cell's more  
10 efficient than a gasoline engine. So it's a  
11 60-mile-per-gallon equivalent.

12 --o0o--

13 MR. KORNBLUTH: So looking at this, taking  
14 landfill gas and making it to hydrogen.

15 --o0o--

16 MR. KORNBLUTH: We looked at a couple different  
17 scenarios. And one was that we just use the baseline,  
18 which is you take your hydrogen and you just throw it -- I  
19 mean you take your landfill gas and just flare it, which  
20 we have to do anyway. We looked at capturing it and then  
21 turning it into biomethane. That's the second scenario  
22 you see there.

23 And there's some -- I'll talk a little bit more  
24 about creating biomethane. It's harder or easier,  
25 depending on what your feedstock is and what -- and if

1 you're using a -- like what Ramin is doing, if he's just  
2 trying to produce specifically bio -- like he's got a cell  
3 and he's trying to do anaerobic digestion and he doesn't  
4 let much air in, it's a lot easier to convert it to  
5 biomethane than if you end up with a lot of air and  
6 nitrogen and other things, because the post-processing of  
7 getting rid of those gases is much more difficult. And  
8 that's also what the guys from Humboldt found.

9           And then in three we talk about capturing it and  
10 doing what we're doing right now, producing energy with it  
11 just through a reciprocating engine, and then using  
12 electrolysis. And then we also compare that with just  
13 offsetting grid electricity through a landfill gas and  
14 energy project. So is it better to just offset some  
15 natural gas and then you can use that natural gas and make  
16 hydrogen from it -- is that easier? -- or do anything you  
17 want with it? So we looked at the fossil fuel CO2 offset  
18 as well as cost and the total yield.

19                               --o0o--

20           MR. KORNBLUTH: And there weren't any big  
21 surprises here. Although it's interesting to see that  
22 with electrolysis you take a pretty big hit because you  
23 first have to convert it to electricity, so you take a big  
24 efficiency hit. And then you've got to use the -- you  
25 have efficiency hit of the electrolyzer. And so if you're

1 going to do that, you're better off probably just  
2 producing electricity with it and offsetting some natural  
3 gas in the grid, and then you could use that natural gas  
4 to produce -- through a steam methane reformer you could  
5 just produce the hydrogen from that.

6 But if you are able to clean it up and run it  
7 through a reformer on site, you can get higher -- a higher  
8 CO2 offset than you could with just an LFG-to-energy  
9 project. And you get about twice the yield if you --  
10 compared to electrolysis.

11 So that is a preferred method, but there are a  
12 couple of hurdles.

13 --o0o--

14 MR. KORNBLUTH: And I'll talk about those in a  
15 second. But first I just want to talk about what makes  
16 those inter -- why would it be interesting to -- well,  
17 first off I'll tell why it's interesting and I'll tell why  
18 it's not as interesting to produce hydrogen from  
19 landfills.

20 One is if we look at -- this is a map in the L.A.  
21 area of existing and planned stations based on the  
22 hydrogen highway. And this was from ITS study. So this  
23 is kind of a -- it's probably changed a little bit, but  
24 this is kind of the Governor's hydrogen highway here. And  
25 then if we sort of superimpose the landfills that are big

1 enough to produce enough hydrogen from them, we actually  
2 see some matches. And the nice part about that is you  
3 take out the whole transportation part of it. So you end  
4 up with an on-site. Compress it and you could dispense  
5 it, and you just add a dispensing cost.

6           So that's what makes it so interesting.

7           In the immediate future what makes it less  
8 interesting is that there's about 140 fuel cell vehicles  
9 on the road today. So as far as anything past a  
10 demonstration project, you know, you're going to get this  
11 guy up and running if it's -- certainly if it's just  
12 producing hydrogen, you're not going to have many  
13 customers driving up.

14           If you're co-producing electricity or liquefied  
15 natural gas, it's a better bet. So, you know, one of the  
16 recommendations was that they're only going to be  
17 demonstration scale and they certainly should be  
18 co-producing electricity and some other product.

19           Oh, and the other -- I want to just touch on that  
20 before I move this one -- next slide --

21                               --o0o--

22           MR. KORNBLUTH: -- is that if there is a lot of  
23 nitrogen or other things in the landfill gas, it's going  
24 to be much harder to clean out. So if you have a  
25 traditional landfill that has a lot of air that ends up in

1 the gas, and some of that ends up as nitrogen, the  
2 nitrogen looks a lot like the methane; and so when they  
3 try to separate the two, it ends up being much harder and  
4 much more expensive. So a setup in future like Ramin is  
5 doing is a lot more advantageous if you want to produce  
6 hydrogen because you have much better land -- the biogas  
7 is different from landfill gas in the sense that it's  
8 really just CH<sub>4</sub> and CO<sub>2</sub>.

9 Now, I'm going to touch real quickly on hydrogen  
10 enrichment of landfill gas, which is actually my main  
11 dissertation topic. So I'm pretty familiar with it. And  
12 what this is is traditionally we have a landfill. We do a  
13 little -- if we're trying to produce energy, electricity,  
14 we clean it up, we put it through an engine. And as Chuck  
15 White talked about, then we end up with various criteria  
16 pollutants, one of which is NO<sub>x</sub>. And that's what the  
17 focus of this is.

18 So they found with natural gas that if they add a  
19 little hydrogen and a lot more air, you can lean out the  
20 mixture, get it below the temperature where you produce  
21 NO<sub>x</sub> and reduce NO<sub>x</sub> emissions.

22 --o0o--

23 MR. KORNBLUTH: So in this report we looked at  
24 just a bunch of different strategies as far as cost and  
25 NO<sub>x</sub> reduction in reciprocating engines and also a couple

1 with turbines. Lean Burn Case 1, that's kind of what  
2 people are doing if they're not that worried about local  
3 standards. It's higher than the future NOx standards, so  
4 lean burn won't be an option eventually, just straight  
5 lean burn.

6           You can use SCR, a selective catalytic reduction.  
7 First you have to de-sulfur -- get the sulfur out. And  
8 that can be a pain, depending on the feedstock.

9           Three, just looking at microturbines.  
10 Microturbines are a less efficient, a less known  
11 technology as far as repair. So they're not as well  
12 accepted. And so they -- the levelized cost of  
13 electricity ends up being higher because they're less  
14 efficient.

15           And then we looked at three scenarios -- or four  
16 scenarios with hydrogen. And one was to, you know, buy  
17 the hydrogen, store it on site and just use it.

18           The other one was to actually reform it on site.  
19 So maybe you'd use natural gas with a small reformer,  
20 you'd produce it.

21           Use an electrolyzer on site.

22           And then this last case was to actually use  
23 in-stream reformation. So you use part of the feedstock  
24 fuel, the landfill gas, and you reform it. So it's more  
25 like a catalytic converter on a car. It's just a device

1 that's part of the engine that converts it.

2 --o0o--

3 MR. KORNBLUTH: Boy, what do you know. And  
4 that's actually the focus of my research. And what do you  
5 know, it comes out as the best one -- interesting -- as  
6 far as cost is concerned.

7 The good news is it's potentially a really low  
8 cost solution to lowering NOx. The bad news is we don't  
9 have a working prototype yet. Although we've shown that  
10 it can work. So right now, at UC Davis we're running  
11 pilot scale research on this right now, and that's -- the  
12 engines are going to be up and running probably in a few  
13 months. And we'll be looking at this much closer as a  
14 future technology for NOx reduction.

15 --o0o--

16 MR. KORNBLUTH: So just in summary, the results  
17 from the whole report is that there is potential for, you  
18 know, some hydrogen to be made from landfill gas in  
19 California. Even to 2 percent's pretty high. Hydrogen  
20 production from landfill gas might be cost competitive,  
21 especially because of the co-location, the issues we  
22 talked about as far as the hydrogen highway. But there  
23 are some technical hurdles and that's a lot to do with the  
24 air entrainment.

25 Early hydrogen fueling stations will be

1 demonstration scale only, as we talked about. And the  
2 HLFG, which is the hydrogen enrichment of landfill gas,  
3 has potential for lowering NOx emissions, but it's only  
4 viable if they're produced in-stream. So that's what we  
5 talked about.

6 And then a couple recommendations. It would be  
7 nice if after we in the lab at UC Davis find out that this  
8 HLFG works pretty well is to try to do it on a slightly  
9 bigger scale. Wouldn't it be nice to do it at the Yolo  
10 County landfill, where they have really nice gas there?

11 And then this -- I think a demonstration scale  
12 project for LFG to hydrogen for vehicle fuel would be  
13 nice, and using one of the facilities where they're having  
14 good luck with getting vehicle fuel anyway, which means  
15 they've come over the hurdles of the biomethane issue.

16 --o0o--

17 MR. KORNBLUTH: So that's all I wanted to say  
18 today. And thanks a lot for your attention.

19 CHAIRPERSON BROWN: Thank you very much, Kurt.

20 I think I need to hear it a couple more times to  
21 understand all of it.

22 Does anybody have any questions?

23 It's a lot to absorb.

24 MR. KORNBLUTH: And feel free to take a look at  
25 the report and then get back with me.

1 CHAIRPERSON BROWN: Okay.

2 MR. KORNBLUTH: Thank you.

3 CHAIRPERSON BROWN: Thank you very much.

4 Back to Fernando.

5 MR. BERTON: Yes, back to me. And I'll try and  
6 be brief.

7 You've heard a lot of information. And from the  
8 staff's analysis, we really see three critical areas --  
9 three critical issues that we, you know, believe that  
10 there should be some significant time spent:

11 One of them is reviewing existing permitting  
12 processes and updating regulations. And I know that Ted  
13 Rauh and the folks at Waste Compliance and Mitigation --  
14 is that the right --

15 CHAIRPERSON BROWN: Yes.

16 MR. BERTON: -- are embarking on that 21st --  
17 permitting for the 21st Century project.

18 The second critical issue really is educating the  
19 public and stakeholders, policy makers, et cetera, on the  
20 benefits and impacts of biofuels and bio-energy  
21 production. And I think paramount to the success of that  
22 education is that that information -- any information  
23 that's given to them is based on science. And in order to  
24 do that we need to continue and monitor, research into  
25 biofuels and bio-energy and other technologies that use

1 biomass and solid waste residuals, which kind of flows  
2 into the third critical issue of a research program --  
3 kinds of a consistent research program that issues grants  
4 for research and demo projects that would enable the staff  
5 and the Board to objectively assess these cross-media  
6 issues that have been brought up today, both on the  
7 biofuel and the bio-energy technologies. It could range  
8 from -- you know, the types of things that we look at  
9 could range from LNG and CNG projects to high hydrogen  
10 upgrading to what Kurt just brought up, life cycle  
11 analyses on biofuels and bio-energy. So it could run the  
12 spectrum.

13           With that, you know, the staff suggests that the  
14 Board kind of focus its future efforts in these critical  
15 areas, specifically the permitting in the regulations, the  
16 grants, and also continuing assistance to local  
17 governments, and the public outreach based on all the  
18 information we get from research.

19           So I'll end at that and would be happy to answer  
20 any questions or if there are any comments.

21           Thank you.

22           CHAIRPERSON BROWN: Any questions, comments?

23           COMMITTEE MEMBER MULÉ: I just want to thank  
24 Howard and staff and all the speakers on your very  
25 informative presentations today. They were great.

1 I just want to have a clarification, Howard, on  
2 reviewing the existing permitting processes and  
3 regulations, my understanding is is that we're going to  
4 examine cross-media permitting regulations, not just Waste  
5 Board; is that correct?

6 PROGRAM DIRECTOR LEVENSON: That's my  
7 understanding as well. Ted's 21st Century project is  
8 just, you know, getting started. There's a charter.  
9 We'll have staff from the Sustainability program involved  
10 in that as well. And then they'll be talking with Susan  
11 Brown of the Energy Commission and certainly the work with  
12 the bio-energy working group, that there'll be, you know,  
13 collaborations so that we're all addressing these  
14 consistently and, you know, across the spectrum of  
15 regulatory agencies.

16 You know, it's not going to be easy. We'll see  
17 what we can do. It may be that the best we can come up  
18 with is SWAT teams, you, local assistance. And maybe then  
19 we can come up with a consolidated proposal. But, you  
20 know, that is the overall intent.

21 COMMITTEE MEMBER MULÉ: Okay, great. Because,  
22 again, we heard that time and time again today. And I  
23 know I've heard it in other forums and workshops. It is a  
24 consistent theme. So thank you very much for that  
25 clarification.

1           CHAIRPERSON BROWN: Well, and I think that there  
2 is an effort at the agency level to try and move in that  
3 direction as well. So we should continue to work with our  
4 agency secretary and our other sister boards and  
5 commissions within Cal EPA that have the same interests  
6 that we do, and some that have different interests and  
7 motivation to see where we have common ground.

8           So, Gary, did you have some --

9           COMMITTEE MEMBER PETERSEN: I'd just like to  
10 thank the staff, Howard and Fernando. Well done and very  
11 informative. And all the speakers. I think this is well  
12 worth the time spent this morning. Thank you very much.

13          PROGRAM DIRECTOR LEVENSON: Thank you, and thank  
14 you for your attention.

15          I will point out that of course this is not just  
16 one point -- this is a point in time and this is part of a  
17 longer process, both as part of the discussions we'll have  
18 on the strategic directives in general. And also this  
19 will feed into specific parts, for example, proposals  
20 regarding contract concepts for research and grants and so  
21 on, as well as the permitting which would be a  
22 non-financial issue. And then discussions that we'll have  
23 with respect to the strategic directives on a research  
24 program in general.

25          So these all fit into a bigger pattern. It's

1 hard always to put it all on the table in one concise  
2 package. But it's hopefully feeding into your discussions  
3 and deliberations on those issues as well.

4 CHAIRPERSON BROWN: Well, thank you. That was  
5 exactly what I just wrote right here to say to you. So I  
6 guess I don't have to say anything other than thank you  
7 very much for putting together the broad sector people to  
8 present today so that we do have that basis of knowledge  
9 as we move forward and contemplate further policies from  
10 the Board. And just an excellent job.

11 One minor matter of business. We still have the  
12 special Board meeting is concurrently running. And,  
13 Kristen, could you complete the Board vote on that.

14 Member Danzinger.

15 COMMITTEE SECRETARY GARNER: Just need to call  
16 Danzinger.

17 COMMITTEE MEMBER DANZINGER: Aye.

18 COMMITTEE SECRETARY GARNER: For both?

19 COMMITTEE MEMBER DANZINGER: For both.

20 CHAIRPERSON BROWN: Thank you.

21 And we will adjourn the special meeting of the  
22 Board with that resolution passing.

23 And then also we will now adjourn for a lunch  
24 break, to come back at 1:15. Is that sufficient time?

25 We will take up the rest of the special committee

1 agenda at that time with 9, 11, and 12.

2 Thank you.

3 (Thereupon a lunch break was taken.)

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 AFTERNOON SESSION

2 CHAIRPERSON BROWN: Good afternoon. Thank you  
3 all. Sorry we got back a little later than I indicated.  
4 Tried to do too much.

5 Why don't we go ahead and start the afternoon  
6 session.

7 Kristen, can you call the roll.

8 COMMITTEE SECRETARY GARNER: Chesbro?

9 COMMITTEE MEMBER CHESBRO: Here.

10 COMMITTEE SECRETARY GARNER: Danzinger?

11 COMMITTEE MEMBER DANZINGER: Here.

12 COMMITTEE SECRETARY GARNER: Mulé?

13 COMMITTEE MEMBER MULÉ: Here.

14 COMMITTEE SECRETARY GARNER: Peace?

15 COMMITTEE MEMBER PEACE: Here.

16 COMMITTEE SECRETARY GARNER: Petersen?

17 COMMITTEE MEMBER PETERSEN: Here.

18 COMMITTEE SECRETARY GARNER: Brown?

19 CHAIRPERSON BROWN: Here.

20 We were kind of waiting for Eric Douglas, our --  
21 if we go ahead and start -- I'll have you go ahead and  
22 start Item 9.

23 Remind everybody in the audience, if you would  
24 like to speak, there's speaker slips in the back of the  
25 room. Turn your cell phones to vibrate.

1           And I'll ask any Board members if they have any  
2 ex partes to report?

3           COMMITTEE MEMBER PEACE: I'd like to say that I  
4 spoke with Neil Moore, Chuck Helgut, Chuck White, and  
5 Scott Smithline.

6           CHAIRPERSON BROWN: Regarding? I think when we  
7 ex parte we have to talk about what it was --

8           COMMITTEE MEMBER PEACE: Okay. Neil Moore and  
9 Chuck Helgut, just about landfill gas and ADC briefly --  
10 and Chuck White. And then Scott Smithline, I think it was  
11 more just kind of a meet and greet, just catching up on  
12 old times.

13          CHAIRPERSON BROWN: No issues.

14          COMMITTEE MEMBER PETERSEN: Madam Chair, I spoke  
15 to Scott too. We spoke about every --

16          CHAIRPERSON BROWN: Was it related to issues that  
17 are being contemplated before the Board, I think is the ex  
18 parte level?

19          COMMITTEE MEMBER PETERSEN: Okay.

20          CHAIRPERSON BROWN: Social conversation with  
21 Scott is okay.

22          COMMITTEE MEMBER PETERSEN: Not only as social.  
23 It was all the above, all the above.

24          CHAIRPERSON BROWN: Social butterfly, Scott  
25 Smithline.

1 (Laughter.)

2 CHAIRPERSON BROWN: Conversing with all Board  
3 members.

4 Those ex partes are not required.

5 (Laughter.)

6 CHAIRPERSON BROWN: Okay. I think we will move  
7 to Item 9.

8 Then thank you very much.

9 And, Mark, I think you're going to open the  
10 discussion.

11 EXECUTIVE DIRECTOR LEARY: Yes, I will. Thank  
12 you, Madam Chair.

13 First and foremost, I want to report that I did  
14 not talk to Scott Smithline over the lunch hour.

15 (Laughter.)

16 EXECUTIVE DIRECTOR LEARY: He's not talking to me  
17 for some reason.

18 Strategic Directive 9. Today's presentation is  
19 presented as a result really of the remainder of the  
20 Strategic Policy Development Committee agenda, which had  
21 to do with much of the activities related to the Strategic  
22 Directive 9. But what I'd like to do today is give you a  
23 sense of how we've tried to frame -- this is really our  
24 first discussion or first substantive discussion about  
25 strategic directives -- and give you a sense for how we've

1    tried to frame our starting point in regards to the  
2    strategic directives.

3               We just kind of in coincidence and in concert  
4    with the rest of the agenda in today's committee meeting  
5    that we happen to start with 9. We had a brief discussion  
6    about 5 last month. But this is really a preview for I  
7    think a longer discussion or more comprehensive discussion  
8    about the remainder of the strategic directives that will  
9    occur next week in a workshop setting.

10              But I think it's good that we preview one, get  
11    your sense for how we've organized it, the format we've  
12    used. And hopefully you'll find our thinking thoughtful  
13    and productive.

14              What we've tried to do here is provide for you,  
15    first of all, the directive itself. And then each of the  
16    subdirectives have defined for them four major components.

17              (Thereupon an overhead presentation was  
18               Presented as follows.)

19              EXECUTIVE DIRECTOR LEARY: The first component is  
20    the baseline, where we are today, our -- "our", meaning  
21    the organization and the staff of the organization --  
22    attempt at quickly summarizing where we think we are in  
23    regards to this subdirective.

24              Then the metrics for evaluating our progress is  
25    the second component.

1           The third component is what we hope it to  
2 accomplish in about a year. We've defined that as our  
3 annual targets.

4           Then the fourth major component for each of the  
5 subdirectives is give you a sense of some of the key  
6 activities that we think are important to accomplish the  
7 annual targets, and ultimately will be related to the  
8 metrics and the performance criteria.

9           As we discussed when we crafted the strategic  
10 directives, some of the metrics don't come easily to some  
11 of these goals that the Board has defined for themselves.  
12 And that's okay. I think we've applied our best thinking  
13 and tried to define how we might go about measuring in --  
14 in a couple of these cases, particularly 9.4, you'll see  
15 baseline and metrics defined in a whole bunch of different  
16 ways that we think together make up a good sense of where  
17 we're making progress, in that case in regards to the  
18 greenhouse gas reduction plans.

19           As we talked about making this presentation  
20 today, we couldn't think of a real kind of sexy, jazzy way  
21 to make this presentation except to kind of walk through  
22 it. So rather than go through the trouble of putting all  
23 this language on a PowerPoint, we're simply projecting off  
24 our own U-drive our work on the strategic directive. And  
25 we can kind of walk through it piece by piece. And I can

1 try to enhance some of the words that are here, but I  
2 think for the most part staff have done a terrific job in  
3 using words economically in defining what we're trying to  
4 accomplish. And I've got to compliment Julie for her  
5 editorial work. She's ultimately the one who put this all  
6 together and applied the fine touch ultimately that  
7 results in the document before you.

8           So, for 9.1: 9.1's about a subdirective setting  
9 the foundation for conducting research activities into the  
10 future for the organization. In concert with the whole  
11 focus of the strategic directive, the idea of research and  
12 development and technology, the Board defined as its  
13 Subdirective 9.1 an interest in defining a better process  
14 for defining what our research might be.

15           The baseline for this subdirective is the fact  
16 that we don't really have an organized process for  
17 defining what our research needs of the organization are  
18 in a short term or the long term. It's largely been done  
19 on an annual basis as a result of the amount of  
20 discretionary CMP dollars at least in the Integrated Waste  
21 Management account. And we've offered good ideas and the  
22 Board's responded favorably and we've allocated the money  
23 and gone forward with the contracts for the research.

24           This subdirective contemplates a more organized  
25 process. But the baseline is we really don't have

1 anything currently.

2           The metrics or performance criteria would simply  
3 be the adoption of some sort of process model. We will go  
4 from not having anything to something. So the metric will  
5 be accomplishing that adoption of a model. Annual targets  
6 is what we've proposed that -- and in the key activities,  
7 by the end of the calendar year, targets by the end of  
8 2007, we will provide to you a variety of research models  
9 that we've identified that we think warrant your  
10 consideration.

11           And then we go on in the key activities talking  
12 about doing the research and analysis about the existing  
13 research models that we're aware of. Several of you have  
14 heard about the Hinckley Center associated with the  
15 Department of Environmental Protection in the State of  
16 Florida, a very interesting model that we'll provide to  
17 you more fully. I personally have had spent a lot of time  
18 with the ARB lately and come to appreciate their research  
19 program. It certainly warrants our consideration. There  
20 are other models, the U.S. EPA Joint bio-energy Institute  
21 model and other models.

22           And so what we hope to do as part of our key  
23 activities is between now and the end of the calendar year  
24 to present to you the variety of models with a  
25 recommendation of what we think ought to be adopted, in

1 the hopes maybe that by the time we get to fiscal year  
2 '08-'09 we will be concocting our research needs in this  
3 new way. That's pretty ambitious. But if we can provide  
4 you the research models by the end of this calendar year,  
5 we could use the second half of this fiscal year to  
6 implement whatever you decide or refine whatever you  
7 decide is the right way to go forward.

8           So let me ask for a -- let me stop at this point  
9 and ask for feedback in regards to how we've defined the  
10 baseline, the metrics, annual targets. This is a pretty  
11 simple one because we're going from nothing to something,  
12 so there's not a lot of metrics involved. But let me get  
13 your reaction to how we've defined the format and what  
14 we've proposed here.

15           CHAIRPERSON BROWN: Board Member Mulé.

16           COMMITTEE MEMBER MULÉ: I think it's great, Mark.  
17 I mean like you said, we currently don't have anything.  
18 So coming up with a process and a model I think is going  
19 to be beneficial for all of us in the short term and in  
20 the long term. So thank you.

21           CHAIRPERSON BROWN: Let me ask, do we have as  
22 part of that process -- not "we" -- you. As part of that  
23 process, are you doing -- I think at one point last year  
24 we talked about an inventory of what research we do have  
25 currently, that we've already contracted to incorporate

1 that into what we have, what we need. Or is this just the  
2 measurement of the model? Because we've contracted with a  
3 lot of studies. We have a lot of information that are  
4 available somehow on the website. I haven't been able to  
5 accumulate it all or read it, for that matter.

6 EXECUTIVE DIRECTOR LEARY: Well, let me respond  
7 in a couple of ways. First of all, this subdirective is  
8 more about the process for moving forward. I think -- all  
9 the other strategic directives have programmatic focuses  
10 that we will advance through the use of some research in  
11 some cases. And so when we're proposing new research,  
12 we'll obviously want to build on past research. And so I  
13 think that would be our opportunity to go forward, is  
14 building from our work in the past to move forward in  
15 regards to any particular strategic directive, we will  
16 offer to you thoughts about further research in that area.

17 I think actually but a comprehensive summary of  
18 the kind of grants and -- I mean research -- well,  
19 research grants and contracts would be fairly  
20 straightforward, a simple way to do it. I mean we have a,  
21 you know, administrative tracking program for all that  
22 money that's being spent.

23 CHAIRPERSON BROWN: Well, and you're right. This  
24 9.1 is specifically about a process. So probably in the  
25 future, once we define the process, we can further define

1 a methodology for accumulating the information we have in  
2 developing a plan for filling the gaps or something like  
3 that.

4 PROGRAM DIRECTOR LEVENSON: Well, we certainly  
5 can do that even as part of bringing an initial set of  
6 options and recommendations to you. In a longer term, I  
7 think -- mark's articulated kind of what we have on this  
8 piece of paper as the first year. Depending on the model  
9 that the Board chooses and then assuming that there's some  
10 dedicated funding to that, the model might have annual  
11 priority setting by the Board. So that based on input  
12 from some advisory body or stakeholders in some manner,  
13 the Board says, "This year we would like to fund projects  
14 in areas A, B, and C and here's the compilation of  
15 research that we've done in the past in that area," the  
16 next year you might want to continue the same thing or you  
17 might want to pick a different area.

18 So there's a lot of different ways that that can  
19 play out once it's implemented. But just getting the  
20 model and a process in place is what we think we can do  
21 for this first year.

22 CHAIRPERSON BROWN: Okay.

23 COMMITTEE MEMBER CHESBRO: Madam chair.

24 Well, I'm not entirely clear on when and how  
25 priorities get set. Is the model -- I mean are we

1 deciding to develop a model that will then help us set  
2 priorities, is that -- or I'm kind of unclear. It doesn't  
3 say here set priorities for research, which seems to me to  
4 be like sort of the shortest line between point A and  
5 point B, you know, like how are we going to set priorities  
6 for -- that's the most important question I see, and I  
7 don't see it answered.

8 EXECUTIVE DIRECTOR LEARY: I think the priorities  
9 come as a result of the consideration of the strategic  
10 directives. Next week we'll get through all the strategic  
11 directive, we'll define all the baseline and metrics and  
12 define key activities for the upcoming year. And those --  
13 in some cases those key activities may in fact be research  
14 that, we'll propose to you, are high priority because  
15 they're a reflection of advancement of the strategic  
16 directive.

17 COMMITTEE MEMBER CHESBRO: Well, it should  
18 probably say that then, because it's unclear about how the  
19 research priorities would be established.

20 EXECUTIVE DIRECTOR LEARY: Well, and as Howard  
21 suggested, it will be somewhat a result of the model being  
22 adopted. For instance, at the Air Board they adopt a  
23 research plan -- a ten-year research plan. They kind of  
24 define ultimately the kind of things they want to  
25 accomplish over ten years. Then every five years they

1 shrink it to a five-year plan. And then every year they  
2 roll out aspects of that five-year plan which they deem to  
3 be the highest priority for the upcoming year. So it's a  
4 well-along, well-thought-out process for advancing the  
5 science around air pollution. It involves an advisory  
6 board, it involves solicitation to all the major  
7 universities in the state seeking grants, seeking  
8 solicitation for ideas for grants.

9           So I think if we evolve to a well-thought-out  
10 gradual process, that ultimately as a reflection of the  
11 Board's priorities which are captured in the strategic  
12 directives, we'll be well on our way.

13           COMMITTEE MEMBER CHESBRO: Well, again --

14           EXECUTIVE DIRECTOR LEARY: But we refine -- we  
15 can explain further.

16           COMMITTEE MEMBER CHESBRO: That should be stated  
17 clearly the way you just stated it

18           EXECUTIVE DIRECTOR LEARY: Okay. Will do.

19           CHAIRPERSON BROWN: I just think one sentence at  
20 the end of adopt -- the process model adopted, add it in  
21 that part of the performance criteria could probably  
22 accomplish what Member Chesbro's requesting. Just a  
23 little clarification that what it's going to be used for.  
24 Adopt a model for the use of setting Board priorities  
25 through strategic directives.

1 EXECUTIVE DIRECTOR LEARY: Will do.

2 CHAIRPERSON BROWN: Does that --

3 COMMITTEE MEMBER CHESBRO: (Nods head.)

4 CHAIRPERSON BROWN: Okay. Any other questions on  
5 9.1?

6 Okay. We are going to go through all of the four  
7 points. We'll have further discussion and public comment  
8 at that point.

9 Okay, 9.2, Mark.

10 EXECUTIVE DIRECTOR LEARY: 9.2 is the Board's  
11 prioritization of our efforts regarding alternative energy  
12 and biofuels. What we've defined here as a baseline is  
13 largely an attempt to quantifying energy production from  
14 the -- or fuel production from the various waste-related  
15 sources. For instance, or as is stated in the  
16 subdirective, the baseline currently for energy production  
17 from landfill gas is 280 megawatts equivalent; the energy  
18 production from solid fuel biomass to energy is 640  
19 megawatts. So the metric then becomes either the number  
20 of facilities utilizing solid waste or landfill gas or the  
21 amount of energy or biofuel produced. Currently there's  
22 very minimal biofuel being produced from solid waste  
23 sources. So any increase over zero would be a positive  
24 outcome.

25 Our annual targets, we identify that increasing

1 landfill gas to energy production, the various programs,  
2 we have supported financially, we'll be moving forward  
3 with. Efforts to clarify current regulations. A lot of  
4 the outcomes that were discussed this morning, activities,  
5 and they're summarized briefly in the bullets below "key  
6 activities".

7 But here we've got a numerical baseline defined  
8 related to energy or equivalence of energy production. So  
9 we can measure our progress at the end of the calendar  
10 year or a year from now. If those numbers have increased,  
11 then ultimately we're making some progress. If those  
12 numbers have decreased, then we may not be making the  
13 progress we'd like to see made.

14 CHAIRPERSON BROWN: Okay. Did you want to expand  
15 on the key activities or they're pretty self-explanatory?

16 EXECUTIVE DIRECTOR LEARY: Well, I think you  
17 probably heard way more about these key activities this  
18 morning than you want to hear again from me, and obviously  
19 much better said this morning.

20 I think we attempt to capture the major  
21 components from some of the activities outlined this  
22 morning. The bottom bullet, in three very simple words,  
23 is a very complicated concept. But it's definitely where  
24 we want to start. And you'll see the same concept of  
25 addressing regulatory barriers in other subdirectives

1 pursuant to other strategic directives concurrent with the  
2 whole idea of reframing the permitting framework in this  
3 state to be more adaptive to the new technologies that  
4 we're hoping to accomplish, together with the other BDOs.

5 CHAIRPERSON BROWN: Thank you, Mark.

6 Do we have any questions on this 9.2?

7 Okay.

8 EXECUTIVE DIRECTOR LEARY: 9.3 is probably one of  
9 the simpler subdirectives. The Board stated as a priority  
10 continuing a very active role in the bio-energy  
11 interagency working group. Our baseline is we've been  
12 active to date. Our performance is that we will continue  
13 to participate in that energy -- bio-energy working group  
14 and we'll contribute to the development of the bio-energy  
15 Action Plan.

16 Metrics are kind of hard to define, but there'll  
17 be many opportunities to provide technical assistance and  
18 analysis on energy and fuels, legislation, and at work  
19 with the Energy Commission. I think the Energy Commission  
20 has a specific deliverable that they're trying to  
21 formulate in regards to this subject area. And that is a  
22 communications plan. So at a minimum we can assist as an  
23 annual target and a metric can assist the CEC with their  
24 development of their communications plan in regards to  
25 this working group.

1           But we're there. This isn't a particular  
2   subdirective where I see a lot of increased activity.  
3   We're clearly involved. We don't intend to back away in  
4   any way, shape, or form from this priority.

5           CHAIRPERSON BROWN: Exactly.

6           Any questions on 9.3?

7           Okay. Let's move to 9.4.

8           EXECUTIVE DIRECTOR LEARY: 9.4 is all about  
9   climate change and our efforts in the greenhouse gas  
10   reduction. This is where it takes a number of metrics or  
11   a number of baselines to -- baseline representations to  
12   capture the full picture. Ultimately we will get to a  
13   point where we will be able to identify where we are  
14   contributing to greenhouse gas reductions. But we're a  
15   long way from quantifying greenhouse gas reductions from  
16   all the potential waste-generated sources.

17           So, until we get there, our baseline really is  
18   represented by the number of landfills, total amount of  
19   waste in place, number of recovery systems in place,  
20   landfill gas recovery, all the, you know, parameters that  
21   are familiar to you in regards to greenhouse gas.

22           We're refining some of these parameters. We've  
23   talked a lot about, you know, 94 percent of the waste in  
24   place is already subject to a landfill gas collection  
25   system. We have a lot of those parameters. We haven't

1 provided it here. We're going to take one more last pass  
2 at it. And then ultimately that baseline will be defined  
3 in terms of those parameters.

4           In metrics. Again, the ultimate metric is  
5 reduction of tons of greenhouse gas. We don't have that  
6 kind of sophisticated ability to measure today. But we'll  
7 continue to capture the metrics, define in the baseline,  
8 so that we can represent to you in a year from now that  
9 the number of landfills -- that there's an even greater  
10 percentage of the amount of waste in places subject to a  
11 landfill gas recovery system; or that an even greater  
12 number of landfills have gas recovery systems and that an  
13 even greater number of collection systems are transforming  
14 that gas to energy. So that I think we'll continue to  
15 represent progress in the targets.

16           And we have other targets identified in the  
17 annual targets, the idea of developing the guidance  
18 document for best management practices, an outcome that's  
19 already stated in the Governor's Climate Action Plan that  
20 we've committed to producing. We'll have to -- you know,  
21 now that the Air Board has adopted a greenhouse gas -- or  
22 landfill gas capture enhancement as one of their early  
23 action measures, we'll be working with them to promulgate  
24 regulations, and we'll be reporting back to you regularly  
25 on those activities.

1           We have the life cycle analysis that we're  
2   conducting and we've provided dates -- they're not  
3   necessarily annual targets, but we've provided dates  
4   certain here as part of our annual targets for the  
5   completion of these various activities. So I think that's  
6   the kind of measurement that you've been looking for us to  
7   provide.

8           And then the key activities are again those same  
9   kind of targets identified in the annual targets -- or  
10   activities related to those targets.

11           I like the way we've done this one. I think it's  
12   a good simple capturing of all of our activities with  
13   regard to greenhouse gas. And until we can quantify the  
14   ultimate metric, this is as best as we're going to be able  
15   to provide.

16           CHAIRPERSON BROWN: That's good, Mark. Actually  
17   this is a good one to start with, because there are some  
18   metrics and some baselines and then there's others that  
19   are less clearly defined. But this works for us, I think,  
20   to evaluate each of the directives and the subdirectives  
21   and look where we are for at least a measurement. And  
22   this is what you've done on all of them for our workshop  
23   next Tuesday and Wednesday.

24           EXECUTIVE DIRECTOR LEARY: And you'll be  
25   receiving those tomorrow -- the rest of the package

1 tomorrow so that you'll have it for nearly a week.

2 CHAIRPERSON BROWN: Okay.

3 EXECUTIVE DIRECTOR LEARY: But we'll go through

4 it in the same way in the workshop setting. Looking

5 forward to having a relaxed conversation with you, and

6 I'll bring the cookies.

7 (Laughter.)

8 CHAIRPERSON BROWN: Okay. Chocolate chip.

9 (Laughter.)

10 COMMITTEE MEMBER CHESBRO: Madam Chair?

11 CHAIRPERSON BROWN: Yes.

12 COMMITTEE MEMBER CHESBRO: One other observation

13 I would make is that the Directive No. 9 included the

14 reference to the waste management hierarchy. But -- and I

15 don't have any specific examples to give you in terms of

16 what would be research related to items higher on the

17 hierarchy. But it seems to me that we've done a pretty

18 good job of focusing on the alternative energy and

19 biofuels. But there's -- in terms of the upper end of the

20 hierarchy, I don't see the emphasis there, except with

21 regards to -- well, in global warming. There is under the

22 Global Warming subdirective focus on other parts of the

23 hierarchy. But I don't see that elsewhere in the research

24 proposal.

25 CHAIRPERSON BROWN: Well, and I think that was

1 one discussion we had in that when we take up all of the  
2 strategic directives looking at the whole grouping before  
3 we pick one or two of them apart at a time, because they  
4 work together better than they work individually. So --

5 COMMITTEE MEMBER CHESBRO: It was meant as a  
6 general comment, not trying to pick these apart or --  
7 specifically.

8 CHAIRPERSON BROWN: No. But I think you touched  
9 on something that's important. So I'm glad you raised it,  
10 because there are so many different parts, like the  
11 producer responsibility and all of that, that, you know,  
12 with the reuse part and -- we need is to look at the big  
13 picture and see how they're all going to fit together.  
14 And at that point we may want to add some more into this  
15 directive that points more to the hierarchy. So I can  
16 appreciate that.

17 EXECUTIVE DIRECTOR LEARY: Hold that thought and  
18 I'll attempt to hold that thought, because I think it's  
19 important that in this total sum of the strategic  
20 directives if we haven't well represented the hierarchy,  
21 then we will need to. But as Margo suggests, that going  
22 one at a time it's hard to get a flavor of how much we've  
23 emphasized that component or another component.

24 CHAIRPERSON BROWN: Which is actually a good  
25 reason that we're doing the whole group next week at once,

1 to lay the foundation and the baseline and the metrics.  
2 Because then as we go back later on and reevaluate, we  
3 don't have to do it as a group again. We can just do it  
4 individually.

5 So, anyway, this is very good, Mark. Thank you  
6 and Julie and Howard and staff who all participated in  
7 putting this together.

8 Do we have any other comments on Item 9?

9 Okay. We have one speaker that I'm aware of.  
10 Scott Smithline.

11 MR. SMITHLINE: Madam Chair, Board members. I'm  
12 Scott Smithline with the environmental group Californians  
13 Against Waste.

14 I'm glad my executive director isn't here today.  
15 He would wonder why I had access and time to speak with  
16 Board members but had nothing worth ex parte'ing to say.

17 (Laughter.)

18 MR. SMITHLINE: So I'll try and rectify that if I  
19 can. Although, frankly, the one point I really wanted to  
20 make was that when we submitted comments on the strategic  
21 directives, particularly on this directive, one of our  
22 concerns was it did seem skewed towards energy and fuel  
23 research. And I think the point that was just made in the  
24 discussion that you just had is really key.

25 I mean I could give you one type of example.

1 Something that we've been thinking about is, what kind of  
2 research is it going to take to bring recycling facilities  
3 back to the State of California? That might be a bullet  
4 point worth looking at. What kind of research is it going  
5 to take to improve the composting infrastructure in the  
6 State of California, knowing that the air districts are  
7 going to be sooner or later implementing harsher -- harsh  
8 requirements on both biosolids and green waste composting  
9 facilities.

10 So I understand that this is a work in progress.  
11 We appreciate that. And I think that the creation of this  
12 process will also have to incorporate that decision-making  
13 process in terms of hierarchy in the first 9.1. So that  
14 was really my only comment.

15 Thank you.

16 CHAIRPERSON BROWN: Thank you, Scott.

17 And I'm sure you had a lot of information worth  
18 ex parte'ing.

19 (Laughter.)

20 CHAIRPERSON BROWN: Okay. And I appreciate your  
21 comments. I think that's what we're all thinking, the  
22 areas that we can add to.

23 Okay. I think we'll move to Item 11.

24 And Howard to make the presentation or initial  
25 introduction.

1           PROGRAM DIRECTOR LEVENSON: Thanks for the  
2 feedback on Strategic Directive 9.

3           And just as an example of kind of what Member  
4 Chesbro and Scott were talking about, one of the other  
5 subdirectives is on organics. You know, we have a plan to  
6 have a stakeholder summit, get some input on where the  
7 Board should focus. Probably there'll be some research  
8 ideas there that would feed into this particular  
9 subdirective. And you can kind of go across the board on  
10 those and look for those linkages. So hopefully some of  
11 that will show up next week as well.

12           COMMITTEE MEMBER CHESBRO: But that reinforces  
13 the need to spell that out a little better in the first  
14 directive that that's where the research priorities come  
15 from is from the fleshing out those other directives.

16           PROGRAM DIRECTOR LEVENSON: Okay. With that  
17 aside, now we're going to move on to -- it's been a heady  
18 day so far. We've talked about fires. We've talked about  
19 biofuel. We've talked about strategic directives. So now  
20 we're going to lighten it up a little bit with end of  
21 life.

22           (Laughter.)

23           PROGRAM DIRECTOR LEVENSON: This obviously is --  
24 this is Item 11. It's presentation and discussion of a  
25 contract report entitled "The Framework for evaluating the

1 End-of-Life Product Management Systems in California."

2 And clearly this is an important step in our process of  
3 looking at a whole suite of issues related to producer  
4 responsibility.

5           When this contract -- as Cynthia and Heidi will  
6 explain further in their presentations, this contract was  
7 contemplated and actually executed a couple years ago when  
8 the ban on the disposal of certain universal waste  
9 components in landfills was implemented, or at least the  
10 sunset was ended. And the Board was concerned and local  
11 jurisdictions were concerned about, how are we going to  
12 finance collection and end-of-life management for these  
13 types of products? So we entered into this contract, and  
14 it's been a long process. I think you're going to find  
15 this extremely informative.

16           In the meantime, particularly over the last year,  
17 the Board has increasingly engaged in discussions about  
18 producer responsibility. And you embodied that concept in  
19 Strategic Directive 5, which we'll talk about next week.  
20 But you'll recall that last month -- let's see, this is  
21 July, yes -- last month we had another all-day workshop on  
22 producer responsibility. We are having this discussion  
23 today. There will be another item tomorrow that's talking  
24 about the paint stewardship dialogue on the national  
25 level. And then in September, one of our key deliverables

1 to you as part of that strategic directive is to come back  
2 with some very specific proposals and recommendations  
3 regarding producer responsibility.

4           So now, at least I am viewing this report as not  
5 only important in and of itself, but also as a key  
6 information piece and a key component of the policy  
7 deliberations that you're going through under producer  
8 responsibility.

9           So much of the material in here will stand on its  
10 own. But it also -- we are using it in our ongoing  
11 analyses for that September item, analyses of how  
12 different products fare under different criteria, what can  
13 we look at in terms of how do we filter out what products  
14 to perhaps work on, what kind of criteria do we look at if  
15 we were going to establish some sort of general framework,  
16 those kinds of things. So that's all going to be boiled  
17 into the September item.

18           But in the meantime we have, after a lot of work  
19 by Cynthia Dunn and Bonnie Cornwall on our staff, and  
20 Heidi Sanborn in R-3, we have a very detailed  
21 comprehensive report that looks at the end-of-life  
22 financing options of a number of different universal waste  
23 HHW products. It's not looking at every aspect of  
24 management, it's not looking at all the kinds of  
25 parameters that we're going to need to look at under

1 producer responsibility, but a key component of that,  
2 what's it costing at the end and how are we going to deal  
3 with that and what are some of the financing options that  
4 we can look at for those kinds of materials.

5           So I just wanted to put, as I tend to do, those  
6 things in context of: Here's the process that we're  
7 undergoing, this is the step we're at right now, you got  
8 more coming at you in another two months.

9           And, meanwhile, I'll turn it over to Cynthia and  
10 Heidi for the actual report presentation.

11           MS. DUNN: Okay. Thank you, Howard.

12           And I promise I didn't copy Howard's  
13 presentation. He just covered a lot of what I was going  
14 to say. But I'll keep my very brief presentation even  
15 more brief.

16           So I just want to go over some key pieces of  
17 background information that are going to help set the  
18 context for Ms. Sanborn's presentation on the end-of-life  
19 report.

20           It seems we're having a few difficulties getting  
21 the presentation up. But no worries. What I'm going to  
22 do is I'm going to tell you about the intent and the scope  
23 of the report, highlight some key events and initiatives  
24 that paralleled the report's development, setting a stage  
25 for current and future Board discussions on produced

1 responsibility and how this report fits into those Board  
2 activities.

3           So this report was commissioned in June 2006  
4 largely out of a response to the sunset on the ban of the  
5 exemption that allowed residents and small businesses to  
6 dispose of their U-waste in the trash. In addition, a  
7 2002 Board report on universal waste generation in  
8 California projected proper end-of-life management costs  
9 for batteries, florescent tubes, and mercury-containing  
10 thermostats alone to be over \$42 million annually. And  
11 that was only for the 32 of the 58 counties in California  
12 that participated in the study.

13           So based on the sunset as well as the findings of  
14 that 2002 U-waste generation report, there was a clear  
15 need for the identification of viable end-of-life  
16 financing options that would alleviate the burden  
17 currently placed on local jurisdictions.

18           Now, specifically the contractor was asked to  
19 identify transitional and long-term financing options for  
20 a variety of E-waste -- of U-waste products rather, such  
21 as household batteries, florescent lamps, and paint, and  
22 provide recommendations on which end-of-life system or  
23 systems models would have the best chance to maximize the  
24 recovery, reuse, and recycling of these product types as  
25 well as encourage product design changes that would reduce

1 future end-of-life management costs.

2           This was accomplished via the preparation and  
3 evaluation of a set of case studies of existing financing  
4 systems, both nationally and internationally, for their  
5 potential applicability for use in California.

6           It should be noted that the Board recognized the  
7 importance of stakeholder input in this report  
8 development. And the scope included utilizing the  
9 expertise of 15 key stakeholders representing a variety of  
10 interests in the solid and household hazardous waste  
11 industry by soliciting their comments and feedback on the  
12 draft contractors report. And Ms. Sanborn will address  
13 those comments in her presentation.

14           Okay. In addition, several events and  
15 initiatives related to EPR occurred in parallel with the  
16 development of this report. Staff have been intimately  
17 involved in the paint product stewardship initiative since  
18 its inception and provided input as to the status of that  
19 initiative the whole time during the this report's  
20 development. And an in-depth update on that initiative is  
21 going to be presented at tomorrow's committee meeting.

22           The formation of the California Products  
23 Stewardship Council give a unified voice to local  
24 government's call for producer financed and producer  
25 managed systems for end-of-life product discards. And the

1 Board's adoption of the strategic directives and Strategic  
2 Directive 5 producer responsibility in February of this  
3 lent further support for the recommendations that had  
4 already begun to take shape within the draft report.

5           So you might wonder where this report fits in  
6 with those events and initiatives, particularly with SD-5  
7 producer responsibility. Last month Board staff presented  
8 a workshop on producer responsibility where the Board was  
9 provided background on producer responsibility  
10 definitions, key issues and approaches, program design  
11 considerations, and testimony from stakeholders. The  
12 Board then gave staff direction to come back in September  
13 of this year with specific policy recommendations relative  
14 to the implementation of SD-5. As Howard previously  
15 mentioned, staff intend to utilize this report as one of  
16 the information pieces which will be used in preparing  
17 those policy recommendations.

18           So these events and initiatives, in essence, set  
19 a landscape to EPR through which he will now be  
20 interpreting this report. And that will be useful as  
21 you're presented with future items such as that in  
22 September. But it's important to bear in mind that with a  
23 somewhat narrow focus of U-waste and paint financing  
24 options, what has emerged through the flexibility --  
25 through the flexibility and extraordinary effort of the

1 contractor to work within a small timeframe and a very  
2 small budget is a report that the Board can use to further  
3 its knowledge of EPR and build stakeholder relationships  
4 by providing a common language with which to tackle  
5 product-specific considerations, as the report presents a  
6 framework which lends itself to analysis of extended  
7 producer responsibility approaches.

8           And it's also anticipated that further discussion  
9 of this report will continue within the solid and  
10 household hazardous waste community. For example, the  
11 report will be presented by the contractor at CRRA later  
12 this month as part of a panel on EOL product management.  
13 And staff have received local and federal government  
14 inquiries on this report, its recommendations and possible  
15 next steps by the Board.

16           So with that, I'd like to introduce Heidi Sanborn  
17 with R-3 Consulting, whose presentation is now up. And  
18 she'll present the report and the recommendations.

19           Thank you.

20           (Thereupon an overhead presentation was  
21           Presented as follows.)

22           MS. SANBORN: Thank you, Howard and Cynthia. I  
23 can't believe we're finally doing this. It seems like it  
24 took a while but I think we'll all be for the better for  
25 it.

1           Basically we'll start the presentation just  
2 talking briefly about what do we have in the presentation.  
3 I was told to keep it to 15 minutes, so I'm just going to  
4 kind of give you a high flyover of the report. And feel  
5 free to ask questions as I go. And I'm sure there'll be  
6 questions at the end.

7                               --o0o--

8           MS. SANBORN: But we'll start with the scope, the  
9 framework that we're going to use to analyze these  
10 end-of-life systems. And I do want to define the word  
11 "systems" because I use it a lot. What we mean by that is  
12 not only a system to fund product management but the  
13 actual material movement itself too. So we've combined  
14 the materials and the money together. So that's what I  
15 mean when I say "system".

16           Case studies. We've got eight case studies of  
17 different end-of-life systems in the report.

18           Recommended system elements, the implications for  
19 California if those elements were to be used. And then we  
20 took stakeholder comments that are in the report and made  
21 some changes actually to the final report based on the  
22 input. And a summary.

23                               --o0o--

24           MS. SANBORN: So the first thing we had to do  
25 when we started looking at this project was we wanted to

1 do case studies and we wanted to look at different  
2 end-of-life systems. When we started looking at different  
3 end-of-life systems -- and we started with 40 and then we  
4 boiled it down to 20 in Appendix A. And then we said,  
5 "How are we going to boil these down and what criteria  
6 would we use and," to be fair, you know, "what systems  
7 would we pick? Well, once we started picking systems, we  
8 realized, how do we measure against each other? They're  
9 just big lumps of information. So we decided, well, we  
10 really have to develop a framework in order for us to  
11 understand what it is that we're comparing apples to  
12 apples. And we thought it would be helpful for you as  
13 well, so then in the future you can take this framework  
14 and apply it to any system and then you can see where it  
15 matches or doesn't match and it gives you discussion  
16 points. And we also thought that would be helpful for you  
17 because it would give you the decision points that you  
18 have as a board, where is it -- you know, can I choose  
19 this Option A or Option B? And if I chose Option B,  
20 hopefully the case studies will give you some idea of what  
21 might be the implications about decision.

22           So we'll go to the next slide.

23                               --o0o--

24           MS. SANBORN: So the framework that we  
25 developed -- actually it took several months to develop

1 the framework because we had to look at a lot of different  
2 systems and figure out what were the commonalities in  
3 those systems and where were those decision points that  
4 were made. We came up with eight elements of a product  
5 management system, the first being the funding mechanism,  
6 which is basically a fee or a tax. We boiled it down to a  
7 fee or a tax. We looked at many different systems, and  
8 ultimately it's a fee or it's a government-imposed tax.

9 The approach, which is voluntary or mandatory.

10 And then the fee/tax collection point. And there  
11 were some misunderstanding on the stakeholder draft. So  
12 I'm very glad we got some of these comments back, because  
13 they helped us to clarify this.

14 The point of manufacture -- when we talk about  
15 collecting a fee at the point of manufacture, we're not  
16 saying reaching across the globe to China and asking those  
17 people to pay a fee. What we're saying is it's the first  
18 person or entity in California to take title to those  
19 products, which is the exact same as it is for the  
20 existing oil program. So when it enters the California  
21 system, that's when we would access that fee. And then of  
22 course the point of sale or the point of disposal. So  
23 those are the three points that you can actually collect  
24 the fee.

25 The fee consolidation is the entity responsible

1 for receiving the taxes or fees from the point of  
2 manufacture, sale, or disposal.

3 Fund oversight, which is the entity responsible  
4 for ensuring that the money is used as intended.

5 Fund management, which is the entity responsible  
6 for managing the administrative duties and the  
7 disbursement of the funds.

8 And then program oversight, which was the entity  
9 that would establish the processes and procedures to  
10 oversee the operations of the actual movement and the  
11 recycling of the product.

12 And the operations themselves, which are all the  
13 entities that it would take to collect, transport, reuse,  
14 and recycle the product.

15 So we'll go to the next slide.

16 --o0o--

17 MS. SANBORN: So we took that framework and then  
18 we applied it to the case studies. But we had to figure  
19 out which case studies would we chose. So we looked at 40  
20 end-of-life systems. They were from all over the world.  
21 We boiled them down to 20. And then we looked at, you  
22 know, what criteria to use to select these eight that we  
23 had the budget to do.

24 So we looked at longevity. The longest has been  
25 in place since 1989, which is the auto battery case study.

1 And in 2007 is the mercury thermostat program from Maine.

2 That just started January of this year.

3 Then the data availability. We very much wanted

4 to do a case study on florescent lamps because they are

5 such a difficult product to collect because of its

6 breakability. But we could not get enough data. And we

7 know that Sweden, we found out, has an 80 percent

8 collection rate on florescent lamps. And so I was very,

9 very curious to see how on earth did they do that. But we  
10 couldn't get enough data to actually put together a case

11 study. So that's the kind of information that the staff

12 can use in the future to go look at those other systems

13 and see if they can get more information.

14 The product types. All of them are hazardous.

15 Four are universal waste, one is paint. And we looked for

16 special features, like the auto battery case study. Even

17 though that's not a universal waste, it is hazardous and

18 it's got a 99 percent collection rate. And that just is

19 astronomical as compared to some of the other rates we've

20 seen. So we thought, "How did they do that?" And what we

21 learned was that there is no one silver bullet in these

22 systems that's going to resolve the problem. It's very

23 complicated.

24 And with auto batteries it was a combination of

25 several things -- five basic ones. There was a landfill

1 ban, which all of these products have. It's mandatory  
2 retail or take-back. And the law that was passed in 1989  
3 is I think a paragraph. It's very, very brief. It's one  
4 page in California law.

5           The market for lead is high. You cannot make  
6 enough new batteries in the world if you do not recover  
7 old lead batteries. There's a lot of liability by having  
8 lead floating around out there, so they want to get it  
9 back.

10           And they streamlined the reverse logistics system  
11 to be very, very efficient. Because when they deliver to  
12 an auto battery store new batteries, they just bring the  
13 other ones back.

14           So all those things combined is what has led to  
15 this very high collection rate.

16           We also looked at, we wanted five -- well, we  
17 picked five state/provincial systems and three that are  
18 national systems, five that are mandatory, three that are  
19 voluntary.

20           And the fees -- none of them are collected at the  
21 point of disposal. We looked at that. But in Japan's  
22 appliance program, it was very clear it was not going to  
23 work, because if you -- you only collect a fee from those  
24 who choose to return it, you're not going to have a fully  
25 funded system. And they ended up with a lot of illegal

1 dumping. So we just decided to just stick with the point  
2 of manufacture or the point of sale.

3 And then we applied the framework to those eight  
4 systems.

5 And we reported the data as it was reported to  
6 us. And that's important, because they measure things  
7 differently. For example, the pounds -- the way they  
8 report effectiveness for the Agricultural Container  
9 Program, RBRC's Rechargeable Battery Program, and the  
10 British Columbia paint, they all say, "We measure by one  
11 pound increase more over last year what we collected.  
12 That's how we decide if we're effective."

13 Well, Maine Thermostats, they decided to do  
14 something very different. They say, "We're going to have  
15 two phases, the first start-up phase and the second phase.  
16 And then the first phase we're going to capture 125 pounds  
17 a year of mercury and the second phase 160 pounds per  
18 year. And our goal is to recycle 90 percent of what is  
19 removed from the homes annually."

20 So we -- it wasn't that we didn't notice that  
21 these were not actually comparing. But we wanted to show  
22 you just exactly how it was being reported to us, because  
23 that's how they measure. And in the future if we want to  
24 compare systems in other states and other countries, if  
25 everybody's measuring differently, it makes it very

1 difficult to compare. So that's something then in the  
2 future that we could look to as -- you know, California  
3 with other states to design systems that measure the same  
4 data points.

5 Next slide

6 --o0o--

7 MS. SANBORN: Now, the eight case studies that we  
8 chose were again the rechargeable battery recycling  
9 corporation; Product Care, which is the paint producer  
10 responsibility organization in Canada; the Maine  
11 Thermostat Law and E-Waste Law -- they're both relatively  
12 new -- the Automobile Battery Take-Back Program in  
13 California; the California E-Waste Law, because that was  
14 of great interest to a lot of people; and the California  
15 Oil Program; and then the Agricultural Container Recycling  
16 Program.

17 I highlighted in the case studies three things on  
18 the very first page that I thought were important, and the  
19 right bar; and, that is, the performance goal, the way  
20 they set it -- established it; the baseline data, if they  
21 have any -- some of them don't even establish  
22 baselines -- and then the effectiveness and how they  
23 measure it. So you can see very quickly in the case  
24 studies what it was that they were comparing.

25 --o0o--

1 MS. SANBORN: And as we looked at the case  
2 studies, some trends started to emerge. On the funding  
3 mechanism clearly the fee was preferred over taxes. And  
4 both visible and invisible fees can fund systems and have  
5 funded systems. So there was no real -- that would not be  
6 the reason to choose one over the other.

7 On the funding approach, "voluntary" it became  
8 very clear has some risks. And I think the Agricultural  
9 Container Recycling Program showed that. RBRC program,  
10 they believe they're effective. But, again, it's how do  
11 you measure. And there are some improvements that could  
12 be made there, but they have an overall good program. But  
13 it is voluntary. They've only got 95 percent  
14 participation. Five percent of the manufacturers still do  
15 not participate in that program.

16 And the Ag Container Program, they're about ready  
17 to go under. They're begging federal EPA to actually  
18 mandate that system because they're about ready to run out  
19 of funds.

20 And in Napa County I know last year they ran out  
21 of money at the end of the year and ended up paying  
22 \$10,000 to recycle the plastic. Because once you start  
23 the program, you can't stop it. And that's the other  
24 concern with voluntarily. If it does start to fail and  
25 you have so many free riders, that those who are paying

1 can't afford to pay anymore, then you've got a system in  
2 place and people count on it.

3           Also, mandatory programs level the playing field.  
4 Manufacturers like to play in a fair market. And if one  
5 manufacturer is contributing like an ACRC to that program,  
6 and they're collecting or recycling containers for other  
7 manufacturers, they have to incorporate that cost into  
8 their price, which puts them at a competitive  
9 disadvantage. So it's inherently not fair actually to  
10 have these voluntary programs.

11           The Fee Collection Point is we -- the point of  
12 manufacture is more efficient is what we kind of concluded  
13 looking at this. Because when you're collecting at the  
14 point of sale, you've got -- like in California, I think  
15 the E-waste Program has 28,500 retailers to pull the money  
16 from. That takes a lot of energy and labor to collect  
17 that money. When it's incorporated in the price, it's  
18 just part of the program. It's not an extra burden.

19           With Fund Consolidation, the producers can  
20 absolutely consolidate funds. They do that all the time.  
21 And government can do it as well. But when government  
22 does it, what we saw is that it increases the size of  
23 government and the costs that it takes to manage those  
24 funds.

25           Next slide.

1 --o0o--

2 MS. SANBORN: Now, Fund Oversight can be  
3 performed again by both government or producers. And this  
4 is where the system works as a whole. Because we thought  
5 it would be appropriate to have a different entity oversee  
6 the program than the entity that's managing it. So, for  
7 example, on fund management, if it were to be  
8 government -- or if it were to be the producers, you would  
9 want government overseeing or vice versa. But when one  
10 entity is doing both, there tends to be a transparency  
11 issue or at least the perception that there's a  
12 transparency issue. So we decided that they would break  
13 those two up and we would in our recommendations recommend  
14 that government do oversight. But I'll get to that in a  
15 minute.

16 Fund management. Government and producers can  
17 successfully manage the funds but government funds, as you  
18 know, sometimes run a risk of being swept. And it seemed  
19 to be generally agreed on that people -- organizations  
20 prefer that government not actually manage the funds,  
21 which I thought was interesting, especially in British  
22 Columbia.

23           Program oversight. Government again and the  
24 producers can both successfully oversee programs. It's  
25 again making sure it's a different entity that should do

1 oversight over -- for program operations.

2           And in operations the trend was that -- as you  
3 could see in a case study, there's a wide variety of ways  
4 that these products could be collected and managed.  
5 There's a lot of stakeholders that could be involved, and  
6 they're all very different. So that really was an  
7 important trend to notice in the case studies.

8                               --o0o--

9           MS. SANBORN: So the recommended system elements  
10 based on what we learned from the case studies for the  
11 State of California for these programs are products that  
12 we're talking about, which is the universal waste and  
13 paint.

14           The funding mechanism we would suggest be a fee,  
15 not a tax; the funding approach be mandatory, not  
16 voluntary; that the collection point be the point of  
17 manufacture, not the point of sale; that the consolidation  
18 of the funds be done by either the producer responsibility  
19 organization or an individual producer. And we thought  
20 it's important to let them opt out so that they can choose  
21 to have their own take-back program like Dell has if  
22 that's what they so choose to do.

23           And then fund oversight be done by government;  
24 that fund management be again the producer -- individual  
25 producer or producer responsibility organization; that the

1 program oversight be government; and operations would have  
2 to be customized by product. There's no way for us to  
3 give any recommendation on that. They're very individual.

4           And the framework, we hope, is recommended as a  
5 starting point for future discussions in designing  
6 end-of-life systems. There's a whole lot of things that  
7 have to be considered when you're going to be implementing  
8 these kinds of systems. But we thought this was a really  
9 good starting point based on what we saw with the case  
10 studies.

11                               --o0o--

12           MS. SANBORN: And with the recommendation of a  
13 mandatory system, we thought we should at least discuss  
14 with you what we know that means, and that is a  
15 legislatively-mandated system.

16           There's a big discussion that would have to  
17 happen around the role of government. And we don't know  
18 where you are with that. So we just took a stab at what  
19 we thought might work. And that's just up to you to  
20 decide. But the role of government the way we've laid it  
21 out would be that it mandates participation and there's no  
22 free riders in the system; that the performance is -- we  
23 have a performance-based regulatory framework, which would  
24 mean that there's a regulatory framework that overarches,  
25 and it's performance-based but it does not micromanage a

1 lot of detail into the system that is inflexible. And  
2 that it would also require transparency and  
3 accountability, and that would be the role of government.

4 Planning for program evolution. We know that  
5 these systems evolve. Almost all of these systems had  
6 different phases and changes over time. And so designing  
7 flexibility into the system I think will be very important  
8 in order for it to be successful and be dynamic.

9 Market forces have a huge impact on whether a  
10 material is going to be recycled. Products with value  
11 require generally less government involvement. And I  
12 think the lead-acid batteries is a perfect example. I  
13 talked to the gentleman at DCSC who's supposedly  
14 overseeing that program, and he hardly really -- he  
15 doesn't to know a lot about it because it's happening and  
16 they're at 99 percent recycling rate, at least according  
17 to BCI, the battery recyclers.

18 And then mutually beneficial partnerships.  
19 Stakeholder collaborations can definitely lead to creative  
20 solutions. And I think the one thing that we learned in  
21 this is that there's no one size fits all and that it's  
22 going to take a dynamic group of people to come to the  
23 table and come up with some important solutions that only  
24 they could do together, that wouldn't happen individually.

25 We have a couple examples that but I'll get into

1 later.

2 --o0o--

3 MS. SANBORN: Now, the implications for  
4 California if this type of system were to be used -- we  
5 suggested that there be two different phases to this.  
6 Right now there's no legislative authority to do anything.  
7 So it would be a voluntary option. So in the meantime  
8 without legislative authority you could actually just  
9 request the producers to start working on the designing of  
10 the operations -- program operations. And I'll get into  
11 the stakeholder comments, but they were unanimously in  
12 agreement that it had to be done by a broad group of  
13 stakeholders. It couldn't be done by one or the other.  
14 So that would be very in alignment with this  
15 recommendation.

16 Offering support in convening the stakeholders.  
17 We have this wonderful building that's broadcast  
18 statewide. And maybe this is something that the Board  
19 could do as a supporting role.

20 Determining the timeframe and the milestones to  
21 achieve 100 percent collection goals. And I want to speak  
22 to that, because we did receive several comments from  
23 stakeholders that, you know, a hundred percent is -- you  
24 know, that's not reasonable.

25 And the way we look at it is this: You know,

1 we're just a contractor. We did not impose the ban. The  
2 ban is on a hundred percent of the products. And so  
3 having anything less than a goal of a hundred percent to  
4 us would be disproportionate. Of course it would be  
5 difficult to attain and there would be milestones and so  
6 forth. But that's why we put that in there. It's a goal  
7 just like a zero-waste goal.

8           And then establishing baselines. This is very  
9 important. I think you have to know where you're starting  
10 so you can measure future success. Developing a formula  
11 to calculate the collection rates. They're very different  
12 by product. I know the rechargeable battery group has  
13 told me that rechargeable batteries can last from 6 years  
14 to 12 years. And people horde them as well. There's  
15 people that horde batteries out there apparently.

16           So it's hard to determine how many are out there  
17 and how many you can get back. But they're all different  
18 and unique.

19           And then how again to measure effectiveness of  
20 the program, the first phase.

21                               --o0o--

22           MS. SANBORN: And the second phase is to at least  
23 consider and look at drafting regulatory framework. This  
24 was done in British Columbia. And when I first saw it, I  
25 was so impressed I called Cynthia and I said, "Oh, my

1 gosh, this is wonderful." It's simple, it's elegant, and  
2 it just -- it allows materials to be added by regulation,  
3 not by legislation, so it's not this huge process. And  
4 it's left to the professionals at the Cal EPA.

5           Then adopting policies on the desired role of  
6 government, producers and retailers and others, so you  
7 can -- the staff has some direction.

8           Communicating the roles of DTSC and the Board for  
9 end-of-life systems I think is very important. There's  
10 some confusion on that right now.

11           Including EPR in state procurement policies is --  
12 it's another step in this direction.

13           You can also consider banning the sale of  
14 products on demonstration of successful collection system.  
15 This is done in British Columbia. You cannot sell paints  
16 in British Columbia if you're not part of a successful  
17 collection program, whether it's individual or it's a  
18 group program. And there's a fine. There's enforcement  
19 of that. And it's interesting, because the government  
20 doesn't really do -- the government does the enforcing,  
21 but they don't do the looking. The paint producers are  
22 the ones who do the looking, because they are the first  
23 ones to know if there's a competitor on the market who's  
24 not participating, and they tell government.

25           You can also consider banning the sale of

1 products from disposal if there's non-hazardous  
2 substitutes. You know, mercury thermostats are a great  
3 example of that.

4           You can consider adoption of enforcement policies  
5 with the adoption of end-of-life systems. That's been a  
6 major problem, I know, with the mandatory rechargeable  
7 battery and self take-back laws. There's no enforcement  
8 of those laws. And when I go into stores from my  
9 jurisdictions -- Sears is on the RBRC website, and I'll go  
10 into their store on Sunrise and there's not a box to be  
11 found and the manager doesn't know what I'm talking about.  
12 Without enforcement, you know, things sometimes don't  
13 happen.

14           And then hosting workshops. There's a lot of  
15 experience in the world that we could learn from. And we  
16 just began to touch on it in this report. But we didn't  
17 do any European systems, and they have a lot going on  
18 there. So that would be something that might be helpful.

19           And then continuing to build a library here at  
20 the Board and ensuring that the staff has access to these  
21 international conferences. And in fact we were told by  
22 one gentleman in Europe that there's a big study that  
23 they're working on at the INSEAD University in France to  
24 actually figure out exactly how much green design is  
25 driven from collecting the fee at point of manufacture.

1 And they have asked would California be interested in  
2 participating in this kind of a study and research. And I  
3 thought, "Well, probably so. I'll let them know." And  
4 I've passed this on to staff. But that's the kind of  
5 opportunity that maybe we could plug into and learn more  
6 about these systems.

7 --o0o--

8 MS. SANBORN: And then we took the report in its  
9 draft form and we gave it to 15 key stakeholders and  
10 received quite a few comments. But we did not receive  
11 comments from IKEA -- we were hoping to receive comments  
12 from them because they already accept E-waste -- the City  
13 of Los Angeles, a big urban area; Californians Against  
14 Waste; Product Stewardship Institute; and CRRC. And I  
15 know they're all busy in -- season.

16 So, you know, we do appreciate the comments we  
17 got because they were actually very helpful and did make  
18 some refinements to the report based on their input.

19 And we did want to let you know -- I think you  
20 did receive the comments that came in a little late from  
21 the Conference of Environmental Health Directors and RBRC.

22 --o0o--

23 MS. SANBORN: So I guess for the audience I  
24 should say that the CCEHD, the Environmental Health  
25 Directors, did say that end-of-life costs should be a

1 total cost and not an add-on that requires additional  
2 handling and that producer responsibility should be  
3 mandatory. That was their -- the gist of their comments.

4 And RBRC sent comments saying that they believe  
5 the voluntary industry-managed programs with some  
6 non-industry directors on the Board for oversight is the  
7 most cost-effective type of program.

8 Next -- oh, the first question we asked the  
9 stakeholders was: Was the framework a useful tool to  
10 analyze systems? Because that's really the goal of this  
11 project. If we can at least get a good framework for you  
12 to use in the future, that would be what our goal was.  
13 And three agreed, one disagreed, and most didn't response  
14 to the question.

15 We have seen a lot of letters since then where  
16 people do think that it works. And I think it does work.  
17 But I mean it could be peer-reviewed forever. So maybe in  
18 the future there'd be refinements. So far it looks like  
19 it works.

20 --o0o--

21 MS. SANBORN: And then the other question we  
22 asked the stakeholders was, the framework itself that we  
23 recommended, what did they think of that. And in general  
24 we had almost unanimous agreement on the fees instead of  
25 taxes.

1           On fund consolidation, management and oversight  
2 there was agreement with the recommendation minus one NEMA  
3 party. And NEMA provided comments for its three groups:  
4 The battery group, the thermostat recycling corporation,  
5 and the lamp group. So they actually had conflicting  
6 recommendations, which I thought was interesting too, even  
7 within the same organization.

8           And the program operations and oversight, that  
9 was absolutely unanimous. Everybody agree that government  
10 should be in oversight role and that a unique set of  
11 stakeholders for each product would manage the program.

12           And then there was disagreement on two major  
13 areas. The first being visible or invisible fees, whether  
14 it's seen at the point a sale or not; and then whether  
15 it's mandatory versus voluntary. But actually there was  
16 more agreement on mandatory than there was on the visible  
17 or invisible fee, which it surprised me. But it doesn't  
18 surprise me that both of these areas are areas where the  
19 money starts.

20           So that's where we are with that. And that's  
21 what we wanted, was the feedback to know where they stood.

22           The one thing I felt -- I was hoping to get some  
23 information from the retailers on what they thought about  
24 an ADF and how much energy does it take for them to  
25 collect it and that, and we didn't get that. So maybe in

1 the future we can. And I know they're very interested,  
2 and the retailers said that they'd be happy to work with  
3 you on that.

4 But ultimately, at the bottom I have, the  
5 consumer always pay. So that's the gist of it. They'll  
6 may, whether it's visible or invisible.

7 --o0o--

8 MS. SANBORN: And, lastly, just to summarize, we  
9 hope that this is a good analysis tool for you, that the  
10 framework can be used not only for these systems but in  
11 future systems comparisons, and that we've provided some  
12 new information for you in these case studies. They are  
13 very detailed case studies, six to eight pages. And we  
14 really put a lot of effort into making those complete.

15 The language for the dialogue we hope you can use  
16 as well, because we did see is different countries use  
17 different terminologies. And if we want to have  
18 discussions with those country, if everybody's using a  
19 different language, that could be a problem. So we tried  
20 to align our language in the report with the language that  
21 is being used in Europe and Canada, such as the producer  
22 responsibility organization instead of a third party  
23 organization which sometimes you hear in the United  
24 States.

25 And then the recommendations on next steps and

1 the basis to begin discussions for end-of-life systems is  
2 what we hope that this will give you. Because we know  
3 this is just the very beginning and the first report out  
4 of the gate for your Strategic Directive 5.

5 So I'm happy to take any questions. I'm sorry if  
6 it took too long.

7 CHAIRPERSON BROWN: It didn't take too long.

8 I just -- I have one quick question, Heidi, and  
9 it's just clarification.

10 RBRC, my understanding, is that -- well, it  
11 appears voluntarily and it's mostly voluntary that RBRC's  
12 genesis came as a result of legislation in Minnesota, New  
13 Jersey, and Florida, which may mandated that any  
14 manufacturer selling batteries in the state have a system  
15 in place for recycling. So if that's the case, is it  
16 really voluntary or is it mostly voluntary because it's  
17 only required in 3 of the 50 states, and -- because I  
18 understand it's taken off. And I think they all like it  
19 and they like selling the green dots, so to speak. But --

20 MS. SANBORN: You raise a really good point.

21 There's really not a single voluntary program  
22 I've seen that has not come from -- without a threat of  
23 legislation. Auto batteries is the same way. The  
24 thermostat recycling corporation is the same thing. And  
25 they tell you that. I mean that's -- and the same with

1 Agricultural Container Program. It really seems to be  
2 that not many of these programs are -- they just do it and  
3 say, "Gee, this is just what we wanted to do." Because I  
4 mean typically I don't think it fits into a business model  
5 to go out and spend million of dollars to collect these  
6 toxic products back.

7           So, no, actually none of them that I know of  
8 actually were purely voluntarily just started out of  
9 nowhere. It was usually some legislation was coming down  
10 the road and that's how it had eventually started.

11           CHAIRPERSON BROWN: Okay. And RBRC's made it a  
12 successful program. And the materials are being recycled  
13 and reused. So it has become a good business model for  
14 them.

15           MS. SANBORN: Yes. I did find out that all the  
16 batteries are going all the way to Pennsylvania. And I  
17 thought that was kind of sad in a way, that we're  
18 shipping, you know, these heavy, heavy materials all the  
19 way to Pennsylvania, because there just aren't enough  
20 recycling facilities. I think the previous speaker spoke  
21 to that.

22           The next nearest location is up in TOXCO in  
23 British Columbia. So we're shipping very heavy materials  
24 very long distances from California to get recycled right  
25 now. But it's great that they have a program certainly.

1 CHAIRPERSON BROWN: Right. Good model.

2 COMMITTEE MEMBER PETERSEN: Madam Chair?

3 CHAIRPERSON BROWN: Gary.

4 COMMITTEE MEMBER PETERSEN: So the battery  
5 guys -- who's watching the battery guys that are telling  
6 us it's 99 percent?

7 MS. SANBORN: What, BCI? What does that mean? I  
8 mean I'm --

9 COMMITTEE MEMBER PETERSEN: Who's watching, you  
10 know, the henhouse or the fox or the lion --

11 MS. SANBORN: Right. Nobody's really -- no --

12 COMMITTEE MEMBER PETERSEN: And the reason we  
13 can't build the facility, because I used to run these  
14 cycling centers and we used to collect batteries here, is  
15 that we tried and we couldn't get a permit. So that's why  
16 it's going to the --

17 MS. SANBORN: And actually I think Todd Coy spoke  
18 to that in his comments from Kinsbursky Brothers on  
19 batteries. He's trying to get a permit to recycle  
20 batteries in Orange County and he's having a heck of a  
21 time doing it.

22 COMMITTEE MEMBER PETERSEN: But here's a classic  
23 example. Why aren't we taking care of our own materials  
24 here? And it's all part of everything we've talked about  
25 all this morning. Interesting.

1 CHAIRPERSON BROWN: Because they can't get  
2 permitted in California, Gary.

3 COMMITTEE MEMBER PETERSEN: I got that. Listen,  
4 gain a recycling center permit was hard enough in L.A.

5 So is there any recommendations on -- as you went  
6 through this whole process, who watches who here?

7 MS. SANBORN: Right. Each system is different.  
8 And the battery group watches the battery group. BCI  
9 watches itself. And because they're so successful and so  
10 few outer batteries are being disposed of, nobody really  
11 pays much attention to it. And that's why I even had a  
12 hard time, you know, getting information. We had to call  
13 retailers locally and find out, "What are you charging?"  
14 Because it's up to them. They don't have to do it. It's  
15 actually voluntary for them. And some of them charge \$8 a  
16 battery, some charge 5, some charge 10, you know. It's  
17 just not watched, because it's working. Whatever it is is  
18 working, and that's why. It was the pressure point I  
19 think between the disposal ban and making retailers take  
20 it back.

21 COMMITTEE MEMBER PETERSEN: But the value's there  
22 on this --

23 MS. SANBORN: But the value's there. And that's  
24 why I think the enforcement --

25 COMMITTEE MEMBER PETERSEN: That's what draws it

1 out.

2 MS. SANBORN: -- needs to be super strong on that  
3 program because the value is in the --

4 COMMITTEE MEMBER PETERSEN: It hasn't changed.  
5 It's still the same. Value brings it out of the waste  
6 stream.

7 CHAIRPERSON BROWN: Any other questions for  
8 Heidi?

9 Not yet. But don't go too far.

10 Thank you very much for all your hard work.

11 And we do have a couple of public speakers. So  
12 if you'll just stay there just in case it prompts  
13 questions from them towards you or that the Board wants to  
14 refer to the report, that would be great.

15 Our first speaker is Kevin Hendrick from Del  
16 Norte County Solid Waste Management Authority. Del Norte.  
17 Del Norte or Del Norte?

18 COMMITTEE MEMBER CHESBRO: They say Del Norte.

19 MR. HENDRICK: Yeah, after 13 years they taught  
20 me they want -- del Norte is how we say it.

21 CHAIRPERSON BROWN: So I did it right the first  
22 time. It's like tomato or tomato.

23 MR. HENDRICK: Good afternoon. My name is Kevin  
24 Hendrick. I'm the Director of the Del Norte Solid Waste  
25 Management Authority, which is a joint powers authority

1 representing Del Norte County and Crescent City.

2           On behalf of the Del Norte Solid Waste Management  
3 Authority, I'm here today to support the recommendations  
4 of this report. We applaud your commitment to move  
5 forward on this initiative, and suggest from our  
6 perspective that the initial focus of this policy should  
7 be extended producer responsibility for household  
8 hazardous waste, universal waste, and electronic waste.

9           February 15th, 2000, the Del Norte Solid Waste  
10 Management Authority adopted the Del Norte Zero-Waste Plan  
11 to define a path for economic recovery and cost-effective  
12 waste reduction for Del Norte County.

13           We have achieved our 50 percent diversion goal  
14 and have plans to attain a higher level of diversion.

15           However, we will not accomplish this through  
16 disposal bans or subsidies. Our goal is to expand our  
17 waste reduction and recycling and composting using market  
18 forces to drive these higher diversion rates.

19           This is how, since we started this, we now charge  
20 \$16 a ton for mixed solid waste.

21           Is that a big number?

22           Our customers are used to it.

23           It's not sustainable for us to continue to  
24 subsidize disposal of recycling of hazardous waste that  
25 results from products made from manufacturers that are

1 completely disconnected from responsibility.

2           Unfortunately, to avoid illegal and unsafe  
3 disposal of these products we must subsidize the disposal  
4 of these materials. However, if we were successful in  
5 achieving 100 percent participation and 100 percent  
6 collection of all E-waste, U-waste, and hazardous waste,  
7 the total cost would likely drain our entire annual  
8 operating budget. This current system will fail.

9           But who will pay for it? That's the question  
10 everybody asks. As a local government service provider,  
11 we recognize one constant: The customer always pays. No  
12 matter what system we have, the customer always pays.  
13 Under the current system the customer pays when they  
14 purchase the product. The customer pays again when the  
15 product breaks and must be disposed. The customer pays  
16 for MSW fees that help to underwrite the full cost of  
17 disposal of E-waste, U-waste, and hazardous waste. Then  
18 our customers pay again for the cleaning up of waste that  
19 are disposed illegally by others that choose not to pay.

20           What we should be seeking is the most efficient  
21 way for the customers to pay only once for recycling and  
22 disposal services. When a customer buys certain products,  
23 it is a reasonable approach to include the end-of-life  
24 costs in this purchase. Psychologically it's easier to  
25 pay in advance for disposal. When you purchase and take

1 home a new product, you've got a new thing. Having to pay  
2 for disposal after the product is broken is far more  
3 painful for the customer because it just broke, and now  
4 they have to pay to get rid of it and buy a new one. Not  
5 a good time for them.

6 (Laughter.)

7 MR. HENDRICK: We strongly support the invisi --  
8 they call it invisible fees for funding producer  
9 responsibility. This will be the most likely paths to a  
10 market-driven approach to sell the problems associated  
11 with the handling and disposal of these wastes. The  
12 manufacturers factor in the end-of-life costs in the sales  
13 price of their product, and then the manufacturer develops  
14 the products that are the least toxic, easiest and  
15 cheapest to recover. They will be the most competitive.  
16 Putting this burden on the manufacturers is the best way  
17 to make them care about the cost of disposal or recycling.

18 All businesses must be mandated to participate to  
19 ensure a level playing field.

20 We ask you to listen carefully to the comments  
21 that you received on this report. You will hear local  
22 government representatives who are burdened with  
23 subsidizing the management and dispose of these hazardous  
24 products. We are seeking a solution to a system that is  
25 broken.

1           You may also hear from business associations and  
2 manufacturers who are seeking to delay action and would  
3 prefer to avoid any responsibility. Some will suggest  
4 that this should be voluntary. It has been voluntary, and  
5 they have not done enough voluntarily to address this  
6 problem.

7           Others will suggest that there needs to be a  
8 national policy. Well, we recommend that they should  
9 support the development of the California model and then  
10 voluntarily implement it nationally.

11           (Laughter.)

12           MR. HENDRICK: Pause for effect.

13           (Laughter.)

14           MR. HENDRICK: We encourage you, the Integrated  
15 Waste Management Board, to embrace the policies  
16 represented in this report, provide the leadership that is  
17 needed to enact extended producer responsibility in  
18 California. Sharing responsibility with product  
19 manufacturers in the State of California is critical for  
20 local governments to do our best, to do our part in  
21 reaching higher levels of diversion to approach zero  
22 waste. Even with our best efforts there are limits to  
23 what local government can do to overcome these barriers.  
24           Now, I'm only one voice in the wilderness. Do  
25 you know where Crescent City is?

1 (Laughter.)

2 MR. HENDRICK: But recently Del Norte Solid Waste  
3 Management Authority, along with 22 rural counties, has  
4 just agreed to join the California Product Stewardship  
5 Council. This organization, which is promoting extended  
6 producer responsibility, currently represents 36 out of 58  
7 California counties and a number of very large cities.

8 The demand for producer responsibility is gaining  
9 momentum in California. And the time for action is now.

10 We suggest that you should support efforts to  
11 engage all the stakeholders in a dialogue, find solutions  
12 that work even in rural California -- that's where we are,  
13 look up there -- and establish successful models that show  
14 that this can be done.

15 First, we can all adopt our own policies of  
16 buying only from vendors that have take-back. When you  
17 buy a new computer, when you buy a printer, ask that  
18 question. Our vendor was shocked when I first asked him.  
19 But we're asking those questions. If every city, every  
20 county, every agency in the State of California made that  
21 the policy, the market would support it.

22 I want to thank you all for taking the time to  
23 take the lead on this very important issue. And we look  
24 forward to working with you to develop a viable producer  
25 responsibility policy for California.

1 I'd be happy to answer any questions or tell you  
2 a joke.

3 (Laughter.)

4 CHAIRPERSON BROWN: Thank you, Kevin, especially  
5 for making the long trip all the way down from up there.

6 COMMITTEE MEMBER CHESBRO: I'm going to ask you a  
7 question I already know the answer to, which is:

8 How long does it take to drive from Crescent City  
9 to Sacramento?

10 MR. HENDRICK: Seven and a half hours.

11 I was going to say at the beginning that I edited  
12 my report in my computer on the way here, but my printer  
13 is not working that well.

14 (Laughter.)

15 COMMITTEE MEMBER PETERSEN: Do they have a  
16 take-back program?

17 MR. HENDRICK: I hope they'll take me back. But  
18 I'm going to turn around and drive back today.

19 COMMITTEE MEMBER PETERSEN: Really well done.  
20 Thank you very much.

21 MR. HENDRICK: I really appreciate our efforts.

22 COMMITTEE MEMBER PETERSEN: And well said.

23 MR. HENDRICK: Oh, and I wanted to thank you for  
24 broadcasting all this, not that there's any benefit for  
25 anybody to just listen to me. But last workshop you had

1 was really nice to be able sit in my office in Crescent  
2 City, go on the web and hear and see all of you and your  
3 responses to the last comments, and then a conversation,  
4 so to help me to prepare for today and it helps me get a  
5 better idea of what's going on. So thank you for that.

6 CHAIRPERSON BROWN: Great. We appreciate your  
7 presentation.

8 Now to another Kevin. Kevin Miller, City of Napa  
9 Public Works Department.

10 MR. MILLER: Hello, Board. I'm Kevin Miller,  
11 Materials Diversion Administrator for the City of Napa.

12 I brought a visual aid. We -- for the City of  
13 Napa we started with these kind of nice visual ones that  
14 when the sunset took place. And we have about 40 of these  
15 around, just for city offices. And it's supposed to be  
16 just for city batteries. We hope so. Although I have to  
17 say about half of them are getting filled up weekly. So  
18 just as a little tiny case study --

19 CHAIRPERSON BROWN: I know. I think DTSC left  
20 the room. So I think you're okay.

21 Oops! Sorry, Carl was there.

22 (Laughter.)

23 CHAIRPERSON BROWN: From now on a hazardous waste  
24 collection site to have one of those, right?

25 MR. MILLER: We take them to a household

1 hazardous waste collection facility. So I think we're  
2 complying with the spirit of it.

3           Again, I represent the City of Napa. I do have  
4 my colleague, Amy Garden, with the Napa County  
5 Environmental Management Department. And I think that's  
6 representative -- if we're representative of local  
7 government, it's also representative that at least in our  
8 county we try to work hand in hand with the county to come  
9 up with realistic answers and to do our best to work  
10 together for our citizens.

11           And I would want to, first off, applaud the Waste  
12 Board and R-3 for the good work that they've done on this.  
13 I think we're going in the right direction trying to think  
14 about the long-term solutions for this kind of problem.

15           And if I can jump to the end game, I would say,  
16 you know, being kind of on the front lines working with  
17 the citizens who ask the typical questions, they don't  
18 understand why, for example, a WalMart is encouraging  
19 fluorescent lighting to sell -- they have a goal of  
20 selling so many lamps -- but they won't take back the old  
21 ones. That just doesn't make sense to them. And they  
22 don't think about all the infrastructure. They just think  
23 this should be a simple, understandable "I take back my  
24 old one, I buy a new one. What's so difficult about that.  
25 You do it for cell phones. Why can't you do it for other

1 products out there?"

2           So I think one way in the nonhazardous world that  
3 we work with trying to have more successful curbside  
4 programs is that the key is it has to be understandable,  
5 has to be convenient, and it has to be free. And by free,  
6 of course has to bear the cost of the system somewhere,  
7 but free at the point of collection or disposal.

8           If you want maximum participation to comply with  
9 the hundred percent landfill ban, it's got to meet all  
10 those criteria to truly be effective.

11           How do you get there? That's what we're going to  
12 talk about for a while, I'm sure. But that needs to be  
13 the prize to have an effective collection and recycling  
14 system.

15           And I also wanted to offer -- because I think  
16 Napa does have one aspect of this of the universal waste  
17 is the E-waste collection, because we have a good case  
18 study with really well documented data. We just completed  
19 our seventh annual collection. And to the best of my  
20 knowledge, we still are the highest per capita collection  
21 event in California, at least. And there were times that  
22 we were in the nation. I think we were second to  
23 Anchorage, Alaska, a couple of years. But we did pretty  
24 well.

25           And in 2001 was the first year we did this. And

1 that was -- so that was about three or four years before  
2 the sunset provision took place and before SB 20 really  
3 took place. We talked to all the experts. They've done  
4 some take-backs programs in Minnesota and other place and  
5 they said, "The most you can ever expect is 20 tons." If  
6 you dumped 20 tons of E-waste, you would just be out of  
7 sight. Well, of course we did 71 tons our very first  
8 event. We're not ready for that much.

9           It escalated to 2004, which was the year before  
10 SB 20 really took effect at least on the dollar  
11 reimbursement side. And we got to 240 tons at a cost -- a  
12 local cost of about \$135,000. This was before the SB 20  
13 took place. So that was all borne by our ratepayers. Who  
14 bears the cost? It's invisible, embedded in our rate  
15 structure is how that happened.

16           But I'm very proud of the fact that those  
17 materials didn't go to a landfill. They should never have  
18 gone to a landfill.

19           This year, we did an event in December, we did  
20 another event -- which we got about 40 tons; we did  
21 another event in June, we did 60 tons. So about 100 tons  
22 at our collection events. But what we did starting in  
23 January is we have year-round at our recycling-composting  
24 facility free and unlimited collection because of the  
25 impact of SB 20 paying for our system. And we have more

1 than tripled how much is brought straight to our facility  
2 on a year-round basis. So we estimate we'll end up with  
3 about 400 tons recovered.

4           So I bring that up as some of the success points  
5 of SB 20, because it is mandatory, because it is level and  
6 across the board mandated to all the point of sale. It  
7 certainly has helped programs like ours maximize our  
8 recovery, and not just these special events. You know,  
9 with the sunset of the DTSC rules, I think we've worked on  
10 the understandable side where the awareness is raised.  
11 But we don't have the infrastructure side. So we're  
12 working on what kind of system can fill that void.

13           Something that SB 20 didn't do too well, quite  
14 frankly, especially from a long-time solid waste  
15 perspective, is it didn't reflect the hierarchy of the  
16 Waste Management Board, because reduce and reuse our not  
17 rewarded in that system. If you don't cancel the unit,  
18 you don't get any reimbursement through the system. So,  
19 you know, headline quote -- I know Reuser Computers had a  
20 great quote. He said taking our computer and canceling it  
21 as an end of life or its scrap metal value is like taking  
22 an F-15 fighter and taking it back for its scrap metal  
23 value. That's kind of the order of magnitude.

24           So I think whatever system you work, to the  
25 extent possible if you can reward reuse and if you can,

1 even better, upstream reward reduction of it in the first  
2 place, that's always been a preferred approach for dealing  
3 with hazardous materials. I mean most people are  
4 surprised to know the cost of disposal might be more than  
5 the cost of the original purchase on many items. If they  
6 create a waste and they don't use it all, then they don't  
7 extend the life of it.

8           So we want to work towards those goals. I had  
9 the idea, just me, if a household battery, this  
10 rechargeable battery, is an option if you do impose a fee,  
11 maybe it ought not to be imposed on rechargeable batteries  
12 if you're trying to encourage that kind of an option for  
13 the consumer over a throwaway disposable battery. Just  
14 want to bring that into the discussion that those  
15 hierarchies are reflected in whatever system you put  
16 together.

17           And the role of government. In my working  
18 professional life I've had the privilege of working in the  
19 private sector, working in nonprofit, and working for  
20 government. And I feel like I've seen a lot of different  
21 sides to it. And government has a role, but government is  
22 not necessarily the answer. We do a lot of things well.  
23 We do a lot of things very inefficiently. I have a -- we  
24 have a system in Napa which is -- I'm very proud of that  
25 we have a publicly owned facility that's privately

1 operated. And it's working tremendously. I think Mr.  
2 Chesbro went out there. We're just seeing the benefits of  
3 that.

4           So I think government's role should be limited  
5 and we shouldn't be doing the whole piece of the pie. We  
6 shouldn't rely on the experts and -- who rely on private  
7 sector to do it effectively. But there has to be  
8 management of it. And from the state perspective, there  
9 are some things that you can do that local government  
10 can't do. A couple of them are we can't level the playing  
11 field. It doesn't really work on a city or a  
12 county-by-county basis as well as it does on a state  
13 basis.

14           Yeah, the education side it has a lot more effect  
15 if you do it. And obviously the oversight, that we see  
16 that on SB 20 trying to certify or manage what is the  
17 proper end life of the recyclers. We would want to see  
18 something like that mimicked, so we have confidence to  
19 talk to our citizens and know that the responsible thing  
20 is occurring for these products, not just faith in a  
21 system that has no oversight over it. That is the role of  
22 government. And it's the role of our public confidence  
23 for our citizens.

24           You know, I just wanted to remind you that -- I  
25 have been around this industry long enough to remember the

1 admin of AB 939. And I remember a tele-study that had  
2 ADFs in it. The Waste Board itself is not necessarily  
3 supposed to be indefinitely funded by the fees on  
4 disposal. It is supposed to look upstream, if I remember  
5 right, to look at things that encourage source reduction  
6 and reuse, and avoiding disposal as the preferred option  
7 for end-of-life products.

8 So with that, I'm available for questions too. I  
9 appreciate your time.

10 CHAIRPERSON BROWN: Thank you, Kevin.

11 Do we have any questions?

12 MR. MILLER: Can I mention one more thing?

13 CHAIRPERSON BROWN: Sure.

14 MR. MILLER: We're trying to be leaders again.  
15 We're looking at doing a universal waste event next year.  
16 Now I have to figure out a way to fund it.

17 (Laughter.)

18 MR. MILLER: So help me out with that.

19 We thought of bringing a whole bunch of batteries  
20 and putting a "help" sign on our head, but I don't think  
21 we could do that.

22 Thank you.

23 CHAIRPERSON BROWN: Thanks, Kevin. Thank you for  
24 making the trip and for everything you're doing.

25 Howard, I think you're up.

1           PROGRAM DIRECTOR LEVENSON: Thank you, Madam  
2 Chair. I didn't realize there weren't any other speakers.

3           CHAIRPERSON BROWN: That's it.

4           PROGRAM DIRECTOR LEVENSON: Okay. Well, I --

5           CHAIRPERSON BROWN: We've got everything else in  
6 writing. Great feedback in writing, we appreciate it,  
7 subsequent to what was sent to Heidi, that you  
8 incorporated. Thank you very much for incorporating all  
9 of that in your report. I think it was helpful to see all  
10 of that change, and then also to have you outline what the  
11 changes were that you made in the report. That was  
12 extremely helpful. I know it was time consuming and  
13 cumbersome for all of you to do that. But I think it does  
14 make it easier for both the stakeholders and the Board  
15 members to see that. So let me thank you very much for  
16 that.

17           This was just a presentation, discussion item, so  
18 there's no action that needs to be taken on this item.

19           So if there are no further questions, I'll leave  
20 it to Howard, if you want to wrap up.

21           PROGRAM DIRECTOR LEVENSON: Sure.

22           Again, as you said, Madam Chair, there's no  
23 action needed. So our plans for this now are to go ahead  
24 and finalize it. It is essentially final. We'll get this  
25 posted on our website. And then, as I indicated at the

1 beginning, we already are using some of the information  
2 from this in the different kinds of parameters and  
3 additional ones as part of our analysis that you will see  
4 in September.

5           And just to reiterate and kind of emphasize what  
6 I've heard from at least a couple of commenters, we will  
7 have several different pathways or options for you to be  
8 looking at in September. One will be a series of filters  
9 in terms of product categories, starting from our waste  
10 characterization data and what's disposed in landfills,  
11 and looking at it both in terms of toxicity and universal  
12 waste, HHW, and then volume-wise or weight-wise in terms  
13 of some of the bigger categories. Filtering those in  
14 terms of which ones might be amenable for some kind of  
15 voluntary approach, because, as has been said, we don't  
16 have any legislative authority at this point.

17           Then, secondly, we also will be doing at least a  
18 staff's take on what an overall framework for approaching  
19 this entire suite of -- or this entire issue might be. So  
20 something that could be used or at least start a  
21 discussion on what might be a legislative framework or a  
22 regulatory framework. But we'll give our best shot. We  
23 expect that there will be a lot of give and take on that  
24 and we may need to do some working groups on that  
25 subsequent to that item.

1           So that's what we're coming back to you with in  
2   September, are some hopefully real decision points for  
3   you, so we can get started in earnest on some of these  
4   areas.

5           I want to again thank Heidi and R-3 as well as  
6   our staff. But, you know, this has been a report that  
7   grew and grew and grew. And I know that there was a lot  
8   of additional effort that went into this way beyond what  
9   we've paid for, and I appreciate that, on Heidi's -- you  
10   know, on behalf of staff and the Board for what Heidi has  
11   put into this. And I appreciate the stakeholder comments  
12   as well. We need their input.

13           CHAIRPERSON BROWN: Thank you.

14           COMMITTEE MEMBER CHESBRO: Madam Chair?

15           In the context of our strategic directive for  
16   expanded producer responsibility -- extended producer  
17   responsibility, as we flesh that out and define what the  
18   statutory limitations are, it is easy for me to say as a  
19   legislative appointee, I realize that there's an  
20   administration process for determining what bills go  
21   forward. I do think that the Board ought to seriously  
22   consider putting forward a legislative proposal in the  
23   context of the unfortunate historical fact that this has  
24   been chipped away at one piece at a time rather than a  
25   comprehensive solution. And understanding that we have

1 some materials that have been banned from landfills and so  
2 clearly have -- it's an imperative that something has to  
3 be done here to figure out -- it's not enough to devote a  
4 piece without doing the other piece.

5 But nonetheless, you know, perhaps aiming high  
6 for a comprehensive solution but understanding that we  
7 might have a more targeted one legislatively that might be  
8 more politically achievable. But I do think that  
9 continued progress even if it is incremental is essential  
10 and that we ought to -- as we proceed from this report  
11 with our strategic directive on this on with the  
12 legislative proposal.

13 CHAIRPERSON BROWN: I think that you're right,  
14 there's more members -- actually some have left and come  
15 back here. But there's members in the Legislature who  
16 could appreciate the fact that we have chipped away one  
17 item at a time and that maybe the climate is right or the  
18 time is right to actually look at a more comprehensive  
19 framework for doing that. And maybe in this next  
20 legislative session we can --

21 COMMITTEE MEMBER CHESBRO: Well, in doing --

22 CHAIRPERSON BROWN: -- put together a proposal  
23 that the Legislature can look favorably upon and with the  
24 confidence that we've done our homework and gotten  
25 stakeholder input and we put together something that will

1 work for California expanding on SB 20 and 50 and, you  
2 know, the items we've --

3 COMMITTEE MEMBER CHESBRO: Well, in the context  
4 for the universal waste materials are that it's beyond  
5 just an environmental argument now; it's something that  
6 the Legislature has -- and the Governor have already  
7 banned. And so now we have local government with this  
8 practical problem of how do we implement that effectively.  
9 And so I think we're kind of half way there with regards  
10 to those particular materials.

11 CHAIRPERSON BROWN: Right. Well, that's what I  
12 mean. Maybe the climate, now that we've, you know, let  
13 the ban sunset and we have this difficult situation for  
14 local governments, we have allies in them and other  
15 stakeholders, and I think the retail and manufacturing  
16 community probably is beginning to see the writing on the  
17 wall and will hopefully start to in earnest work  
18 collaboratively to look at a solution before -- if we have  
19 another piece-by-piece mandate. But I think you're right.  
20 So thank you.

21 Any other comments, questions?

22 Great. Thank you all very, very much. We've got  
23 some work ahead of us still.

24 And I think we'll go to Item 12.

25 Mark, are you going to frame this and then turn

1 it to Elliot?

2 EXECUTIVE DIRECTOR LEARY: I will, Madam Chair,  
3 and Elliot and Tom.

4 The Board will recall when we last brought a --  
5 well, the last real substantive award item, I don't know  
6 if it's the last award item, but the last substantive  
7 award item regarding financial assurance, there was a  
8 level of, I sensed, of discomfort about the process. And  
9 it had been some time since the Board really revisited the  
10 contracting process. So I don't recall specifically if  
11 you directed us to take the process up, but we did anyway.  
12 And what we'd like to do is offer you our thinking and  
13 request your direction about how the Board considers  
14 contract proposals, and go through the steps of the  
15 process and seek your thoughts, direction on what we might  
16 do to improve your level of comfort. So that ultimately  
17 when we bring an award item before you, you are fully --  
18 very comfortable and can embrace our selection of a  
19 contractor.

20 So with that, I will turn it over I think Elliot  
21 first. And then Tom will walk us through the details.

22 (Thereupon an overhead presentation was  
23 Presented as follows.)

24 CHIEF COUNSEL BLOCK: Tom and I are going to do a  
25 little tag team here.

1           We've got a two-part item, just an overview of  
2 the contracting process, which I'm going to take care of.  
3 And that's just to really just go through from the first  
4 step to the last to provide a framework. So that then Tom  
5 will be talking to you specifically about the processes  
6 where the Board has some more control of the internal --  
7 we'll term the internal processes for some direction from  
8 you.

9           So obviously -- I'm going to run through this  
10 fairly quickly. There's a lot of information in the  
11 agenda item. I'm going to try not to repeat too much of  
12 that. But obviously if you have questions as I'm going  
13 through, feel free to stop me and ask that. So obviously  
14 the Board has statutory authority to do contracts. The  
15 contracts are aware the staff or some other state agency  
16 can't provide those services. And we obviously have a  
17 control agency, Department of General Services, that  
18 reviews those after we approve those contracts.

19                               --o0o--

20           CHIEF COUNSEL BLOCK: The first step in the  
21 process is the allocation proposal process. It comes  
22 before you in an agenda item, where essentially executive  
23 staff are bringing ideas to you for projects that we'd  
24 like to see the Board spend money on.

25           And they should be linked to strategic directives

1 if all's going well.

2 --o0o--

3 CHIEF COUNSEL BLOCK: Those allocation proposals  
4 under the current system, it's a document that  
5 incorporates the key elements of the source -- scope of  
6 work. Excuse me. And there are some examples in the  
7 agenda item, Attachments 1 and 2, that provides detailed  
8 information. It is a draft at that point and the agenda  
9 item where you were talking about these is a place for you  
10 to provide some additional direction or to tweak those  
11 proposals.

12 --o0o--

13 CHIEF COUNSEL BLOCK: The second step in the  
14 process would be sometime subsequent to approval of the  
15 allocation proposals. And that's the actual approval of a  
16 scope of work. Again, that's a lot of the same  
17 information, although in theory it's potentially more  
18 detailed in what would be called a finalized scope of  
19 work. The scope of work is a very important document.  
20 It's going to talk about the purpose of the contract, the  
21 specific task and details, lists the deliverables and  
22 timelines. Obviously there's a lot of getting some  
23 consensus from the Board as to what those projects should  
24 be.

25 --o0o--

1 CHIEF COUNSEL BLOCK: The other reason the scope  
2 of work becomes very important is then the document that  
3 gets used as part of the bid document so that proposals  
4 are geared towards what the Board is asking for.

5 --o0o--

6 CHIEF COUNSEL BLOCK: And then it becomes a  
7 document that the contract manager uses to assure delivery  
8 of the deliverables -- that's purely inarticulate. Sorry  
9 about that. It's been a long day.

10 So I'm just reemphasizing that point. Obviously  
11 this is a very important document in the process.

12 --o0o--

13 CHIEF COUNSEL BLOCK: The next step after  
14 approval of the scope of work is the bidding process  
15 through -- depending on the contract we're talking about,  
16 there are a number of efforts -- a number of methods that  
17 can be used. And these are actually spelled out through  
18 the Public Contracts Code in the State Contracting Manual.  
19 There are quite a few of them listed in the agenda item  
20 and then talked about. We're actually just going to talk  
21 about requests for proposals, RFPs, just for the purposes  
22 of today's discussion.

23 But if you have any questions about some of those  
24 other ones, obviously you can ask.

25 --o0o--

1 CHIEF COUNSEL BLOCK: And there are two types of  
2 RFPs: RFP primary, which is the more typical one that you  
3 use, which sets forth criteria. And then once an  
4 evaluation is done, the contract goes to the lowest cost  
5 bid that meets those minimum criteria.

6 RFP secondary actually looks at other  
7 qualifications and gives them a little bit more weight  
8 than the primary.

9 --o0o--

10 CHIEF COUNSEL BLOCK: In terms of how that  
11 evaluation occurs, the contract manager, the person that's  
12 tasked -- the staff person that's tasked with this is  
13 going to start from -- we have some sample scoring  
14 criteria, I guess for lack of a better word, that's  
15 actually included in Attachment 4, they start from there  
16 and then they tailor it to the particular contract if  
17 there's a need for some more specific scoring or criteria  
18 that's used.

19 An evaluation panel is chosen. They use that  
20 scoring criteria to come up with a score. And actually  
21 because under the State Contracting Manual and those rules  
22 the evaluation panel members are supposed to do that  
23 independently, they don't actually talk with each other.  
24 It's actually the contract unit gets their scores and does  
25 the actual averaging of them. Another funny little quirk.

1                               --o0o--

2               CHIEF COUNSEL BLOCK:   The next step in the  
3 process after that would be approval of a contractor.  
4 Again it comes back to the Board in an agenda item.  And  
5 the Board is either approving that or giving staff further  
6 direction.  And if for some reason there's something as  
7 the process it wends it's way through that creates a  
8 problem, the Board can direct staff to go back and start  
9 the process again, maybe tweak some issues related to the  
10 scope of work or that sort of thing.

11                              --o0o--

12              CHIEF COUNSEL BLOCK:   It's actually not  
13 necessarily a separate process.  An alternative to that  
14 other process is there are some contracts that -- some  
15 contract tasks that have been delegated to the Executive  
16 Director.  I think you're all familiar with those.  Those  
17 are actually included in the Board-Staff Linkage Policy 8,  
18 which is also an attachment.  So there are some contracts  
19 that don't have that last step.

20                              --o0o--

21              CHIEF COUNSEL BLOCK:   Then finally the last step  
22 in the whole process is for contracts other than if they  
23 are exempt through particular provisions, they're going to  
24 go to the Department of General Services for their  
25 approval that we followed all of the steps -- the required

1 steps in the process. And they're also the agency that we  
2 hear any protests if any were filed.

3 And with that, I'm going to turn it over to Tom,  
4 unless you have some questions about the general process.

5 And Tracey, he's ready for his PowerPoint.

6 CHAIRPERSON BROWN: Any questions regarding the  
7 general process?

8 Okay. I think we're ready, Tom.

9 (Thereupon an overhead presentation was  
10 Presented as follows.)

11 DEPUTY DIRECTOR ESTES: Excellent.

12 Good afternoon. They sent me in as the closer.

13 (Laughter.)

14 DEPUTY DIRECTOR ESTES: So what we'd like to do  
15 is dialogue with you all just a little bit to see what  
16 you'd like to consider in terms of how this process goes  
17 and what your involvement would be or what you'd like to  
18 see.

19 So I guess I have to control the mouse.

20 Would you? Thanks.

21 --o0o--

22 DEPUTY DIRECTOR ESTES: And this focuses on the  
23 level of information that the Board requires in allocation  
24 proposals.

25 As Elliot said, the current proposal contains a

1 detailed scope of work. Howard, my friend down here on  
2 the right, would tell you that entails an awful lot of  
3 work to do that up front in the conceptual phase. And so  
4 our request is going to be kind of buttressed against  
5 that. And the point there is is that not all proposals  
6 are approved. So there's a lot of upfront work. We're  
7 not real sure, you know, where the Board's going to go.

8           The reason we created the allocation proposal  
9 process, that did include what we call a final draft scope  
10 of work associated with that, is we were thinking that if  
11 the Board had more of an upfront opportunity, they could  
12 give us a little bit more detailed direction at that time,  
13 you know, primary tasks, milestones, and deliverables.  
14 And then the thought there was is that ultimately the  
15 Board would be comfortable in delegating scope of work  
16 approval to the Executive Director. That would save  
17 between 30 and 60 days in the contracting process.

18           But as we all know, during the policy development  
19 that got a resounding no. I mean the Board made its  
20 intent very clear that they definitely want to approve  
21 scopes of work.

22           So what we're -- the Board has two options: You  
23 can, you know, say that we want to continue with the  
24 detailed scope of -- or detailed allocation proposal  
25 format, which includes a scope of work; or use the one

1 that we believe would eliminate some of the inefficiency  
2 and redundancy of having two agenda items that ostensibly  
3 focus on the scope of work.

4           And to that end what we're suggesting, replacing  
5 the allocation proposal format that you're currently aware  
6 of is something that would be more akin to a one pager  
7 that would cover the overall intent and the need for the  
8 contract, and including the link to the approved strategic  
9 directive. We would work in there primary tasks and  
10 milestones, services and deliverables, the proposed  
11 solicitation method, the estimated contract amount, and  
12 then obvious the Government Code 19130, which basically  
13 requires us to use civil service staff first, which we  
14 wouldn't be coming to you -- well, we would discuss with  
15 you how that would play itself out, in one way or the  
16 other.

17           Of the things that we're discussing today, a  
18 decision or some direction from you all would be pretty  
19 key because we're trying to bring an item to you in August  
20 for actually our CNP allocation for the year. So  
21 depending on what your preference would be would determine  
22 whether we can make that August deadline or not.

23           To be frank --

24           CHAIRPERSON BROWN: Are you trying to put  
25 pressure on this Board, Tom --

1 (Laughter.)

2 CHAIRPERSON BROWN: -- to act? I said are you  
3 trying to put pressure on us to act in a particular way?

4 DEPUTY DIRECTOR ESTES: No, I'm just being matter  
5 of fact.

6 CHIEF COUNSEL BLOCK: Full disclosure.

7 CHAIRPERSON BROWN: Just stating the facts,  
8 ma'am.

9 (Laughter.)

10 DEPUTY DIRECTOR ESTES: So what I'd like to do is  
11 maybe, you know, entertain some questions or some  
12 discussion at each of these points.

13 CHAIRPERSON BROWN: Well, probably the best place  
14 to start is if anybody has questions regarding -- or  
15 desire to see a full scope of work as part of an  
16 allocation proposal.

17 I mean does anybody feel strongly about receiving  
18 that as opposed to a framework, so to speak, that outlines  
19 the purpose and the intent and all -- do you have a sample  
20 of that in here, the --

21 DEPUTY DIRECTOR ESTES: I don't have a sample for  
22 you.

23 CHAIRPERSON BROWN: Because that would have been  
24 helpful in persuading me at least to be able to see  
25 something like that in writing.

1           DEPUTY DIRECTOR ESTES:  Yes ma'am.  I see the  
2 error of my ways.

3           (Laughter.)

4           COMMITTEE MEMBER CHESBRO:  Madam Chair, it would  
5 certainly increase my comfort level -- and I would assume  
6 that this would be the case -- that the scope of work  
7 remain available so that if any Board member or Board  
8 members wanted to look at the more detailed document, that  
9 they could.  And so --

10          CHAIRPERSON BROWN:  Well, I think I think what's  
11 being requested is that we would approve a contract  
12 allocation proposal in an abbreviated form before the  
13 scope of work is actually detailed.  So --

14          DEPUTY DIRECTOR ESTES:  That's correct.

15          CHAIRPERSON BROWN:  And without holding up the  
16 process, the scope of work would be detailed and then the  
17 Executive Director would have the ability to go out  
18 prior --

19          EXECUTIVE DIRECTOR LEARY:  No, I think -- what  
20 we're suggesting is we shrink the allocation proposal,  
21 because ultimately we will bring back a scope of work for  
22 the Board's --

23          CHAIRPERSON BROWN:  So we vote on it.

24          COMMITTEE MEMBER CHESBRO:  Yeah, okay.

25          DEPUTY DIRECTOR ESTES:  Yeah, maybe I wasn't

1 clear on that.

2 EXECUTIVE DIRECTOR LEARY: In contrast to the  
3 current proposal, which you actually get two looks at the  
4 scope of work.

5 CHAIRPERSON BROWN: And then bring it back again.

6 EXECUTIVE DIRECTOR LEARY: Bring it back again.

7 COMMITTEE MEMBER PETERSEN: Makes a lot of sense  
8 to me.

9 CHAIRPERSON BROWN: Yeah, I certainly support the  
10 more efficient utilization of staff's time in developing  
11 proposals in a more abbreviated way for support for the  
12 Board. And then if the Board supports the allocation  
13 proposal, the scope of work is developed, brought to the  
14 Board for concurrence.

15 DEPUTY DIRECTOR ESTES: Okay.

16 EXECUTIVE DIRECTOR LEARY: A key component that I  
17 don't know if we've often addressed, and I came to learn  
18 sitting through the Air Board's process of making contract  
19 selection, is they provide their board initially what they  
20 expect the outcomes of the contract to be. And I thought  
21 that's something we really haven't been too attuned to  
22 trying to define in advance. So as part of our proposals  
23 in concept, we would also define for you what we expect  
24 the outcome to be. What would be the key deliverable of  
25 this? And then when you bless it, then we come back and

1 tell you how we're going to get there in a detailed scope  
2 of work, that will then be subject to your subsequent  
3 approval.

4 CHAIRPERSON BROWN: Could I request that some  
5 draft proposal of the framework sample be developed and  
6 then just -- I mean we don't have to vote on it  
7 necessarily. But maybe before next week's Board meeting  
8 we can come up with an idea of what would be included, you  
9 know, what the intended outcome is and all of that, so we  
10 would see the framework of what we're actually going to  
11 do.

12 DEPUTY DIRECTOR ESTES: Certainly.

13 CHAIRPERSON BROWN: Gary.

14 COMMITTEE MEMBER PETERSEN: Yeah, I just -- you  
15 know, we've been doing this a long time, since the  
16 seventies here, and we funded a lot of studies and a lot  
17 of things along the way. So when we do these things, is  
18 there -- when you write these things up so I can  
19 understand it, would there be a place to put a notation  
20 that there is a study that we did in 1860 that would maybe  
21 be involved with what we're doing now?

22 You know what I'm trying to say?

23 DEPUTY DIRECTOR ESTES: Right. If you were not  
24 paying for the same thing twice or how does it enhance  
25 the --

1 COMMITTEE MEMBER PETERSEN: Yeah.

2 DEPUTY DIRECTOR ESTES: Sure.

3 COMMITTEE MEMBER PETERSEN: Or other related  
4 things.

5 DEPUTY DIRECTOR ESTES: Got that, Howard?

6 COMMITTEE MEMBER PETERSEN: Howard, what do you  
7 think?

8 COMMITTEE MEMBER DANZINGER: Gary, you would have  
9 been there. So wouldn't you just remember that study?

10 EXECUTIVE DIRECTOR LEARY: Howard was there in  
11 1860.

12 (Laughter.)

13 PROGRAM DIRECTOR LEVENSON: I'm sorry. I was  
14 actually paying attention to my E-mail.

15 CHAIRPERSON BROWN: We're digressing very quickly  
16 here.

17 COMMITTEE MEMBER PETERSEN: I've had it.

18 CHAIRPERSON BROWN: I was going to say -- there  
19 are too many external stakeholders still here.

20 I'm sorry Howard that you were --

21 (Laughter.)

22 CHAIRPERSON BROWN: -- the butt of every -- but  
23 Tom should be the "but," because we're going to give you  
24 direction to develop some things for circulation to the  
25 Board members --

1 DEPUTY DIRECTOR ESTES: Correct.

2 CHAIRPERSON BROWN: -- that we can look at for  
3 next week's Board meeting. I think it would be helpful  
4 because it would address Gary's question and Rosalie. And  
5 I think we all would just like to see what it is. It's  
6 not that we don't support in concept what you're  
7 suggesting.

8 DEPUTY DIRECTOR ESTES: No, that's fine. I think  
9 we're very prepared to do that.

10 COMMITTEE MEMBER MULÉ: Tom, I think you know  
11 we're all in support of streamlining all the work that  
12 staff does in putting together contract concepts and then  
13 coming back to us -- how many times? And you and I've had  
14 this conversation.

15 DEPUTY DIRECTOR ESTES: Right, absolutely.

16 COMMITTEE MEMBER MULÉ: So we're all for  
17 streamlining. But if you can show us a sample of it, that  
18 would be great.

19 DEPUTY DIRECTOR ESTES: Certainly. We'll be glad  
20 to.

21 Okay. Let's move on.

22 --o0o--

23 DEPUTY DIRECTOR ESTES: Board --

24 CHAIRPERSON BROWN: Is there more?

25 DEPUTY DIRECTOR ESTES: Pardon?

1           CHAIRPERSON BROWN: I'm packed up.

2           DEPUTY DIRECTOR ESTES: You want more?

3           EXECUTIVE DIRECTOR LEARY: There's more.

4           CHAIRPERSON BROWN: There's more? Oh, shoot. My  
5 binder's closed. I guess I'll open it. Go ahead.

6           DEPUTY DIRECTOR ESTES: At least you're honest.

7           (Laughter.)

8           DEPUTY DIRECTOR ESTES: Board review and approval  
9 of the contract scoring criteria. This is an area that --  
10 do we have that -- this is an area that we're looking for  
11 some input.

12           Historically the contract staff have developed  
13 the sample proposal scoring sheets with what we call  
14 general scoring criteria. The contract manager for a  
15 given contract will then customize that for his or her  
16 evaluation of the proposals. So in other words that's the  
17 sheet of music that all the panel members use to score  
18 from. And it standardizes it.

19           What we're throwing out there requesting is some  
20 direction from the Board if you're interested in reviewing  
21 and approving the scoring criteria for all or designated  
22 contracts. And if you are, we can come up with some  
23 options on how that might look and come back to you with  
24 some recommendations.

25           So, you know, some of the thinking was there may

1 be some high profile contracts that you might want to have  
2 some input in how the points are going to be assigned or  
3 what the waiting may or may not be. But then there may be  
4 just -- you know, just a matter of some, you know, routine  
5 contracts that, nah, just go ahead and continue the  
6 process.

7 COMMITTEE MEMBER MULÉ: Excuse me. Couldn't we  
8 do that on a case-by-case basis?

9 DEPUTY DIRECTOR ESTES: Yes, ma'am.

10 CHAIRPERSON BROWN: The one thing I will throw  
11 out there is I think we need to be consistent if we do it  
12 on contracts. Or if we choose not to do it on contracts,  
13 I don't know why we would do it on grant proposals as  
14 well. I mean grants are even smaller amounts than some of  
15 our contracts, so --

16 EXECUTIVE DIRECTOR LEARY: We do do them on  
17 grants. That's --

18 CHAIRPERSON BROWN: I know. Well, that's why I'm  
19 throwing it out there. We do it on little grants. Do we  
20 even need to do that or maybe bring that to the Board? I  
21 don't know -- you know, I think that this item is before  
22 us because of the contract that we did review recently and  
23 a need to review the process. I might suggest that we  
24 review the process for grants as well. I mean not --

25 EXECUTIVE DIRECTOR LEARY: Well, or let me take

1 your thinking one step farther. If you're responding to  
2 us -- it seems like your response to this idea is that we  
3 use our discretion when deciding when we bring back  
4 scoring criteria for the Board's review. May you also  
5 allow us to exercise some discretion in defining criteria  
6 for grants?

7 CHAIRPERSON BROWN: Yes.

8 EXECUTIVE DIRECTOR LEARY: But maybe there are  
9 key grants that do require or that you want some input on  
10 how the scoring is done and there are others that simply  
11 don't rise to that level of significance.

12 CHAIRPERSON BROWN: That are annual-type grants.

13 EXECUTIVE DIRECTOR LEARY: Right.

14 CHAIRPERSON BROWN: What may be helpful is to  
15 find out what other bodies similar to ours do. You  
16 suggested a couple of times that in reviewing Air Board's  
17 policies some things came to light that, you know, maybe  
18 make more sense than the way we do things, that we should  
19 look at them as a possibility. Maybe we do that or -- the  
20 other possibility is looking at a threshold, you know,  
21 anything above \$150,000 the Board, you know, looks at the  
22 scoring criteria or -- I mean I think -- I don't know how  
23 anybody feels about that. Because I think the biggie is  
24 the big allocations of contracts that are over a certain  
25 threshold that the Board feels a fiduciary responsibility

1 to have more input or review rather than some of the  
2 smaller contracts that are pretty routine for work that  
3 the Board does.

4 So maybe we could throw that back to you to  
5 noodle on that for a few days or a week and come back to  
6 us with a recommendation.

7 EXECUTIVE DIRECTOR LEARY: Some examples of types  
8 of contracts where we would suggest that the Board have  
9 some input on scoring criteria and some types of contracts  
10 that you would not, and similarly with grants.

11 CHAIRPERSON BROWN: Uh-huh.

12 EXECUTIVE DIRECTOR LEARY: Although can we --  
13 grants really aren't contemplated in the title of this  
14 item.

15 CHIEF COUNSEL BLOCK: No. But this is a  
16 discussion and request for direction. So you're giving us  
17 some general direction to also take a look at that other  
18 issue. It's not actually a decision making, so we're  
19 okay.

20 CHAIRPERSON BROWN: I'd like to request that you  
21 look at that also.

22 Anybody else want to add anything to that  
23 direction?

24 COMMITTEE MEMBER CHESBRO: Madam Chair, what I  
25 think I hear being said is that we would -- or maybe this

1 is what I'm thinking -- that we'd have a process where we  
2 could pull something out and do it by exception. What I  
3 don't want the Board -- to happen here is that we wind up  
4 bogged down with every single grant and every single  
5 contract engaged in the details. I'd be more interested  
6 if it's a contract that a Board member or Board members  
7 were particularly concerned about, that we'd have the  
8 process for doing that, as opposed to it being -- so it's  
9 more by exception rather than everything.

10 CHAIRPERSON BROWN: Well, currently we review  
11 every single grant --

12 COMMITTEE MEMBER CHESBRO: Well, I know that.  
13 But I mean in this early involvement in the scoring  
14 criteria and --

15 CHAIRPERSON BROWN: Yeah, we're trying to take a  
16 step back and allow staff putting together a more skeletal  
17 process where there's a framework --

18 COMMITTEE MEMBER CHESBRO: Yeah, that's what I'm  
19 suggesting.

20 CHAIRPERSON BROWN: Yes, exactly.

21 DEPUTY DIRECTOR ESTES: We'll, like you said,  
22 noodle on this one and come back with some thoughts.

23 CHAIRPERSON BROWN: Yes. Okay.

24 DEPUTY DIRECTOR ESTES: It seems to me, just  
25 thinking off the top of my head, that maybe the ones that

1 rise to the level we deal with in the allocation proposal  
2 phase. Because what was contemplated here if we were  
3 going to bring this back, we'd bring it back  
4 simultaneously with the scope of work, you know, and let  
5 you take a look at the scoring criteria and the scope of  
6 work at that time.

7 COMMITTEE MEMBER CHESBRO: The other one that  
8 hasn't been mentioned is the interagency agreements, which  
9 I know there've been -- like when we had the tire thing  
10 with CSU Chico, there was some discussion around that.  
11 And what I generally -- I mean I had a discussion with  
12 Howard about this when he briefed me about this item.  
13 What I want in all of these processes is to know that  
14 there's enough people involved in the scoring process and  
15 that they're spread out enough that any kind of cozy  
16 relationship that may exist, then it could -- and I'm not  
17 pointing fingers, because it could be -- if the Board were  
18 involved, it could be us who have too cozy relationships.  
19 So I'm not, you know -- I'm not pointing fingers at  
20 anybody. But rather the idea that you have multiple  
21 scorers coming from different perspectives broadens the  
22 examination of the qualifications, and make sure that it  
23 isn't because of the subjectivity of one or a few people,  
24 you know.

25 And I was reassured about that in the contract

1 process in terms of what Howard described to me for  
2 contracts. But I also think we should be thinking about  
3 it in relation to grants and interagency agreements as  
4 well.

5 CHAIRPERSON BROWN: So directed.

6 DEPUTY DIRECTOR ESTES: Fair enough.

7 CHAIRPERSON BROWN: I think that we all concur.

8 And thank you for raising that.

9 I think that -- you know, there's a general  
10 assumption that the evaluation team is broad. But then,  
11 you know, every once in a while, you know, you just kind  
12 of want to be assured again that we may maintain that  
13 level of integrity.

14 DEPUTY DIRECTOR ESTES: Excellent.

15 Shall we move on?

16 CHAIRPERSON BROWN: Where are you going?

17 DEPUTY DIRECTOR ESTES: I'm going to talking  
18 about Board members as being panelists on contract  
19 evaluation.

20 CHAIRPERSON BROWN: Great.

21 Okay. Let's move on.

22 DEPUTY DIRECTOR ESTES: Now, this one should get  
23 some lively debate, I'm thinking.

24 We're interested in whether the Board members --  
25 and there was some precedent where this occurred

1 previously with a different board on grants -- but whether  
2 the Board members would entertain the notion of wanting to  
3 be involved as a panel member to actually score grants, go  
4 through the evaluation process for contracts. And, you  
5 know, we're thinking that, I mean, heck, we could share  
6 the workload.

7 CHAIRPERSON BROWN: Can I -- let me just ask how  
8 this part came up. Was there a request for a board member  
9 or a board office to participate in an evaluation process?

10 DEPUTY DIRECTOR ESTES: I don't believe so. I  
11 think we were --

12 CHAIRPERSON BROWN: So that you're just routinely  
13 going through the entire contracts process to see?

14 DEPUTY DIRECTOR ESTES: Yes, ma'am. We just  
15 thought based on the fact that the members before had been  
16 involved in the grant process, and they came back with an  
17 appreciation that it was a pretty good process, that we  
18 thought that this might be worthwhile, we'd throw it out  
19 there. I'm seeing a lot of --

20 CHAIRPERSON BROWN: I personally -- if I can  
21 weigh in. I personally do not think a board member should  
22 be evaluating a contract if they intend to vote on it --

23 COMMITTEE MEMBER DANZINGER: I agree. I'm not  
24 interested in this at all.

25 CHAIRPERSON BROWN: -- period. If you want to

1 recuse yourself -- or eliminate yourself from a vote, then  
2 you can submit yourself as part of a panel.

3 COMMITTEE MEMBER MULÉ: It appears --

4 CHAIRPERSON BROWN: But I don't know --

5 COMMITTEE MEMBER MULÉ: -- a conflict of interest  
6 here.

7 EXECUTIVE DIRECTOR LEARY: I think that's the  
8 trade-off. If you do participate, then you are ultimately  
9 precluded from voting on the award if the award were to  
10 come to a vote before the Board.

11 CHAIRPERSON BROWN: I think it should be Board  
12 members. But I would like to hear what other Board  
13 members think about advisors as well, because I think  
14 advisors participate in the evaluation of an agenda item  
15 and are in a position that may compromise the process as  
16 well. And I think it needs to be Board members and Board  
17 advisors that are precluded from participating in  
18 evaluation.

19 COMMITTEE MEMBER DANZINGER: Yeah, I agree.  
20 Advisors used to sit so these panels too. Long ago they  
21 did. And, yeah, I agree, I don't think they should.

22 COMMITTEE MEMBER MULÉ: I don't support that  
23 either.

24 COMMITTEE MEMBER CHESBRO: And it raises --  
25 there's a number of questions about, if we did do it, who

1 decides who participates in which one and -- and it just  
2 seems like it raise more questions than it answers.

3 EXECUTIVE DIRECTOR LEARY: And just so you know,  
4 we're not advocating for this. It has happened in the  
5 past and we thought for discussion purposes you ought to  
6 at least entertain the notion and see how -- so we get a  
7 sense of how you feel about it.

8 COMMITTEE MEMBER MULÉ: However, I do have a  
9 question. And I just want to get this on the record.

10 Is it legal for a Board member to request a copy  
11 of a proposal?

12 DEPUTY DIRECTOR ESTES: Funny you should ask.

13 CHIEF COUNSEL BLOCK: Well, the short answer is  
14 yes.

15 COMMITTEE MEMBER MULÉ: Yes. Okay, that's all I  
16 needed to know.

17 CHIEF COUNSEL BLOCK: And this was the discussion  
18 that went on in the last contract process that Mark was  
19 alluding to, and we checked through this and that is  
20 allowable.

21 COMMITTEE MEMBER MULÉ: Okay. Because I was told  
22 different things at different periods in time and on  
23 several different contracting processes. So I just want  
24 to make sure that we all understand what we can and can't  
25 do.

1           So thank you.

2           CHIEF COUNSEL BLOCK: And that's a great segue to  
3 the next thing that Tom was going to ask.

4           COMMITTEE MEMBER MULÉ: I knew that. That's why  
5 I did that.

6           DEPUTY DIRECTOR ESTES: It's almost as though you  
7 guys are reading our mind.

8           So we wanted to cover this very issue, providing  
9 contract proposals to the Board after the selection of a  
10 proposed contractor but prior to the consideration of the  
11 award item.

12           Obviously the Board recently did that. They may  
13 incorporate this process into the contract procedure for  
14 all contracts or for some contracts. It's really -- I  
15 think that's a discussion point.

16           And of course, as always, when you're dealing  
17 with something that's legal, there are going to be  
18 numerous caveats.

19           So we're looking for your direction on how you  
20 would like to do this, what would be your comfort level if  
21 you were to go down the path of looking at proposals.

22           But there are some cautions, and I think maybe  
23 it's probably best just to get those out.

24           The Board members in reviewing the proposals  
25 cannot substitute their own evaluations for those of the

1 selection panel. They can't offer -- they can't select a  
2 different bidder. And they can't discuss the proposals  
3 outside the Committee or the Board meetings. Basically  
4 you'd be subject to the same, you know, restrictions that  
5 the scoring panel is subject to as well.

6 But if it helps the Board's comfort level with  
7 all or some contracts, you can certainly see the  
8 proposals.

9 CHIEF COUNSEL BLOCK: And just to jump in. And I  
10 think the reason we're asking this, looking for direction  
11 on these is, as you may remember from the last time we did  
12 this, depending on the number of bids you're looking at  
13 and how significant they are, you're talking about a lot  
14 of paper. So we certainly if the Board wanted to make it  
15 a regular process for all of these, we could. But we're  
16 looking for a direction as to maybe we would just do it  
17 case by case if there are particular contracts.

18 COMMITTEE MEMBER CHESBRO: Well, is the  
19 implication of it that the concern that was raised in  
20 committee would somehow -- might be raised informally  
21 prior? Because if that's the case, then I think  
22 that's -- I mean I think that the discussion of these  
23 things need to take place in the public setting and -- by  
24 the Board in the public setting. And so I don't know  
25 why -- what getting it in advance of it actually appearing

1 on the agenda would be for.

2 CHAIRPERSON BROWN: Yeah, I don't -- well, I  
3 think what we did last time is made them available for  
4 review of all three of the contracts. What I'm hearing  
5 from staff is that it could become a cumbersome process if  
6 we made it part of the regular distribution of process and  
7 preparation of the Board item. What I think makes the  
8 most sense is that it is available upon the request of  
9 each Board member to review if there is a desire. With  
10 the number of people that review we certainly have, you  
11 know, two, three, four copies of the proposal already  
12 prepared, but, you know, we can just maintain in the Legal  
13 Affairs Office. You're welcome. And Board members could  
14 check it out if they wanted to review the item.

15 COMMITTEE MEMBER CHESBRO: But that review by a  
16 Board member wouldn't influence the recommendation  
17 appearing on the agenda, right?

18 CHAIRPERSON BROWN: No, no, no, no, no. It would  
19 be already on the agenda --

20 COMMITTEE MEMBER CHESBRO: That's what I'm trying  
21 to get clear about, right.

22 CHAIRPERSON BROWN: -- with all of the caveats  
23 that Tom outlined. But like the 2296 contract, if we  
24 wanted to read them all, we could.

25 COMMITTEE MEMBER CHESBRO: Sounds good.

1 COMMITTEE MEMBER MULÉ: Agreed. Thank you, Madam  
2 Chair.

3 CHAIRPERSON BROWN: Okay. That is our direction.

4 DEPUTY DIRECTOR ESTES: Okay. Do I have you  
5 sufficiently warned?

6 CHAIRPERSON BROWN: You got another one?

7 DEPUTY DIRECTOR ESTES: I'm done.

8 CHAIRPERSON BROWN: Cool.

9 Anybody have any --

10 EXECUTIVE DIRECTOR LEARY: So we will bring this  
11 item back for discussion at the Board meeting with the  
12 follow-on samples that we talked about --

13 CHAIRPERSON BROWN: Yes.

14 EXECUTIVE DIRECTOR LEARY: -- to finalize the  
15 discussion, finalize the direction. And then we -- it  
16 seems likely that we'll be on target for an August agenda  
17 item to consider the '07-'08 contract concepts.

18 CHAIRPERSON BROWN: Yes. That is our direction.

19 EXECUTIVE DIRECTOR LEARY: Perfect.

20 Thank you.

21 CHAIRPERSON BROWN: Thank you.

22 EXECUTIVE DIRECTOR LEARY: Nice discussion.

23 CHAIRPERSON BROWN: Any other items? Anything  
24 not on the agenda to raise?

25 Old business, new business?

1           This meeting is adjourned.  
2           (Thereupon the California Integrated Waste  
3           Management Board, Strategic Policy Development  
4           Committee meeting adjourned at 3:35 p.m.)

5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

1 CERTIFICATE OF REPORTER

2 I, JAMES F. PETERS, a Certified Shorthand  
3 Reporter of the State of California, and Registered  
4 Professional Reporter, do hereby certify:

5 That I am a disinterested person herein; that the  
6 foregoing California Integrated Waste Management Board,  
7 Strategic Policy Development Committee meeting was  
8 reported in shorthand by me, James F. Peters, a Certified  
9 Shorthand Reporter of the State of California, and  
10 thereafter transcribed into typewriting.

11 I further certify that I am not of counsel or  
12 attorney for any of the parties to said meeting nor in any  
13 way interested in the outcome of said meeting.

14 IN WITNESS WHEREOF, I have hereunto set my hand  
15 this 23rd day of July, 2007.

16

17

18

19

20

21

22

23 JAMES F. PETERS, CSR, RPR

24 Certified Shorthand Reporter

25 License No. 10063